

10/782,363

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	139	TRITHIOCARBONATE AND POLYMER	USPAT	OR	OFF	2006/02/22 08:44
S2	640	260/79	USPAT	OR	OFF	2005/11/21 09:59
S3	1	("6031201").PN.	USPAT	OR	OFF	2006/02/15 13:32
S4	384	LAI.IN. AND POLYMER	USPAT	OR	OFF	2006/02/15 13:34
S5	34	S4 AND "2003".PY.	USPAT	OR	OFF	2006/02/15 13:34
S6	0	LAI.IN. AND "2003".IN.	USPAT	OR	OFF	2006/02/15 13:35
S7	0	LAI.IN. AND "2003".IN.	USPAT	OR	OFF	2006/02/15 13:35
S8	11953	LAI	USPAT	OR	OFF	2006/02/15 13:35
S9	2812	LAI.IN.	USPAT	OR	OFF	2006/02/15 13:47
S10	21	US-2520338-\$.DID. OR US-0179623-\$.DID. OR US-3285945-\$.DID. OR US-3285949-\$.DID. OR US-3367992-\$.DID. OR US-3564074-\$.DID. OR US-3770698-\$.DID. OR US-0392849-\$.DID. OR US-4530962-\$.DID. OR US-0476941-\$.DID. OR US-0505551-\$.DID. OR US-0140068-\$.DID. OR US-0157077-\$.DID. OR US-0198510-\$.DID. OR US-5258445-\$.DID. OR US-5280068-\$.DID. OR US-5312956-\$.DID. OR US-5385963-\$.DID. OR US-6380335-\$.DID. OR US-6395850-\$.DID. OR US-6596899-\$.DID.	USPAT	OR	OFF	2006/02/15 13:48
S11	1	("3135716").PN.	USPAT	OR	OFF	2006/02/16 07:41
S12	1	("3179623").PN.	USPAT	OR	OFF	2006/02/16 07:42
S13	1	("3242129").PN.	USPAT	OR	OFF	2006/02/16 07:42
S14	1	("3892819").PN.	USPAT	OR	OFF	2006/02/16 07:43
S15	1	("3928491").PN.	USPAT	OR	OFF	2006/02/16 07:42
S16	1	("4769419").PN.	USPAT	OR	OFF	2006/02/16 07:43
S17	1	("5055515").PN.	USPAT	OR	OFF	2006/02/16 07:44
S18	1	("5140068").PN.	USPAT	OR	OFF	2006/02/16 07:44
S19	1	("5157077").PN.	USPAT	OR	OFF	2006/02/16 07:44
S20	1	("5198510").PN.	USPAT	OR	OFF	2006/02/16 07:45
S21	1	("6153705").PN.	USPAT	OR	OFF	2006/02/16 07:45

EAST Search History

S22	1	("re31310").PN.	USPAT	OR	OFF	2006/02/16 07:46
S23	1161	trithiocarbonate or trithiocarbonates	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 07:47
S24	589	S23 and (vinyl or resin or epoxy or epoxies or resins or resines or polyester or polyesters or polymer or polymers)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 07:48
S25	17	S24 and (tough or toughener or toughened)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:12
S26	3	vinyl adj epoxide adj copolymer	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:14
S27	2955	acrylic and copolymer and polyepoxide	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:14
S28	1027	S27 and carbonate	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:14
S29	123	S28 and (unsaturated adj monocarboxylic)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/16 08:15
S30	1398	558/243 or 525/107 or 525/117 or 525/525 or 525/535	USPAT	OR	OFF	2006/02/21 13:19
S31	1365	S30 and (polymer or polymers or (vinyl adj ester) or resin or resins)	USPAT	OR	OFF	2006/02/21 13:19
S32	1572	558/243 or 525/107 or 525/117 or 525/525 or 525/535	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:19

EAST Search History

S33	1537	S32 and (polymer or polymers or (vinyl adj ester) or resin or resins)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:20
S34	240	S33 and (tough or toughener or toughening or toughened)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:20
S35	1	S34 and (trithiocarbonate or trithiocarbonates)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:21
S36	128	S34 and (carbonate or carbonates or thiocarbonate or thiocarbonates)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:22
S37	75	S36 not ((sodium adj carbonate) or (potassium adj carbonate))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/02/21 13:22

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NEWS 7 DEC 21 IPC search and display fields enhanced in CA/Caplus with the
NEWS 8 DEC 23 IPC reform
NEWS 9 DEC 23 New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFUL/
NEWS 10 JAN 13 IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS 11 JAN 13 New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
NEWS 12 JAN 17 INPDOC
NEWS 13 JAN 30 Pre-1988 INPI data added to MARPAT
NEWS 14 JAN 31 IPC 8 in the WPI family of databases including WPIV
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DICTIONARY FILE UPDATES: 20 FEB 2006 HIGHEST RN 874742-76-4

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=> S TRITHIOCARBONATE

466 TRITHIOCARBONATE
1 TRITHIOCARBONATES

L1 466 TRITHIOCARBONATE
(TRITHIOCARBONATE OR TRITHIOCARBONATES)

=> FILE CAPLUS

COST IN U.S. DOLLARS
FULL ESTIMATED COST
SINCE FILE
ENTRY 5.20
TOTAL
SESSION 5.41

FILE 'CAPLUS' ENTERED AT 09:54:16 ON 22 FEB 2006
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STN SEARCH TRANSCRIPT

10/782,363

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=> S L1 AND POLY?

1758 L1

3807615 POLY?

242 L1 AND POLY?

=> S L2 AND VINYL

399062 VINYL

569 VINYL

399226 VINYL

(VINYL OR VINYL)

17 L2 AND VINYL

=> D 1-7 IBIB ABS HITSTR

L3 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

DOCUMENT NUMBER:

TITLE:

Preparation of fused thiadiazinediones, particularly dioxothiadiazynaphthalenones, as antiviral agents for the treatment of infections involving RNA-containing viral species such as hepatitis B and C and HIV

INVENTOR(S):

Hutchinson, Douglas K.; Bellettini, John R.; Betebenner, David A.; Bishop, Richard D.; Borchardt, Thomas B.; Boase, Todd D.; Cink, Russell D.; Flentge, Charles A.; Gates, Bradley D.; Green, Brian E.; Hinman, Mira M.; Huang, Peggy P.; Klein, Larry L.; Krueger, Allan C.; Larson, Daniel P.; Leanna, M.; Robert, Liu, Dachun; Madigan, Darold L.; McDaniel, Keith F.; Randolph, John T.; Rockway, Todd W.; Rosenberg, Teresa A.; Stewart, Kent D.; Stoll, Vincent S.; Wagner, Rolf; Yeung, Ming C.

PATENT ASSIGNEE(S):
U.S. Pat. Appl. Publ., 182 pp.

SOURCE:

DOCUMENT TYPE:

LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.

US 2005107364

PRIORITY APPL. INFO.:

OTHER SOURCE(S):

GI

KIND DATE

A1 20050519

US 2004-925072

US 2003-497607P

MAHPAT 142:463769

APPLICATION NO.

US 2004-925072

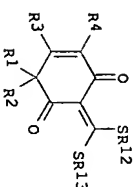
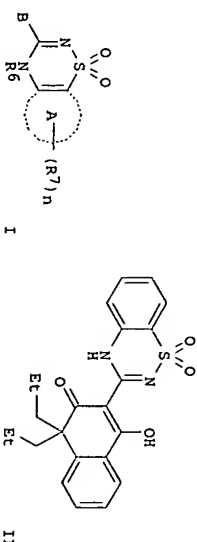
US 2003-497607P

P 20030825

DATE

20040824

20030825



AB

Thiadiazinediones I [A = mono- or bicyclic aryl, cycloalkyl, heteroaryl, heterocyclyl; B = (un)substituted 5-oxo-1-cyclohexen-1-yl, 6-oxo-1-cyclohexen-1-yl, 7-oxo-1-cyclohepten-1-yl, 6-oxo-1,3-cyclohexadien-1-yl; n = 0-4; R6 = H, (un)substituted alkyl, alkenyl, alkynyl; R7 = NC, OHC, O2N, oxo, halo, (un)substituted alkyl, alkenyl, alkynyl, acyloxy, alkoxy, carbonyloxy, etc.], particularly fused dioxothiadiazynyl-substituted naphthalenones such as II, and their enolate anion salts, are prepared as antiviral agents for the treatment of infections involving RNA-containing viral species such as the hepatitis B and C viruses and HIV. Alkylation of Me phenylacetate with allyl bromide and sodium hydride, hydrogenation of the alkenes, ester cleavage with potassium trimethylsilanolate to yield 2-phenyl-2-propylpentanoic acid, conversion of the acid to the acid chloride and acylation of di-Et malonate, acid-catalyzed cyclodehydration, direct amidation of the ester with 2-aminobenzenesulfonamide, and cyclodehydration yields II; treatment of II with aqueous sodium hydroxide in acetonitrile/water yields the enolate anion sodium salt of II.

[Bis(alkylthio)methylene]cyclohexenediones III [R1 = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, aminocarbonyl; R2 = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, aminocarbonyl; R3 = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, aminocarbonyl; R4 = H, NC, OHC, halo, O2N, (un)substituted alkoxy, acyloxy, aminocarbonyloxy, sulfonyloxy, aminosulfonyloxy, etc.; R3 heteroaryl, cycloalkyl, cycloalkenyl, or heterocyclyl ring; R12, R13 = alkyl, alkenyl, alkynyl] are claimed. Processes for the preparation of I are also claimed. I inhibit hepatitis C viral RNA polymerase with IC50 values of 2 nM to 500 µM and inhibit hepatitis C replication with EC50 values of between 5 nM and >100 µM. (no data on individual compounds.)

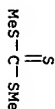
IT

2314-48-9, Dimethyl trithiocarbonate
R1: RCT (Reactant); RACT (Reactant or reagent)

(preparation of fused thiadiazinediones, particularly dioxothiadiazynaphthalenones, as antiviral agents for the treatment of infections involving RNA-containing viral species such as hepatitis B and C and HIV)

RN

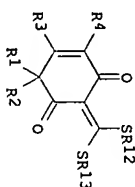
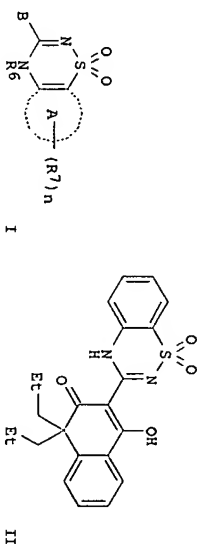
2314-48-9 CAPLUS Carbonotrithioic acid, dimethyl ester (9CI) (CA INDEX NAME)



L3 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2005:182643 CAPLUS
 DOCUMENT NUMBER: 142:280233
 TITLE: Preparation of fused thiadiazinediones, particularly dioxothiadiazinylphenalenones, as antiviral agents for the treatment of infections involving RNA-containing viral species such as hepatitis B and C and HIV

INVENTOR(S): Hutchinson, Douglas K.; Bellettini, John R.; Betebenner, David A.; Bishop, Richard D.; Borchardt, Thomas B.; Bosse, Todd D.; Cink, Russell D.; Flentge, Charles A.; Gates, Bradley D.; Green, Brian E.; Hinman, Mira M.; Huang, Peggy P.; Klein, Larry L.; Krueger, Allan C.; Larson, Daniel P.; Leanna, M. Robert; Liu, Dachun; Madigan, David L.; McDaniel, Keith F.; Randolph, John T.; Rockway, Todd W.; Rosenberger, Teresa A.; Stewart, Kent D.; Stoll, Vincent S.; Wagner, Rolf; Yeung, Ming C.
 SOURCE: Abbott Laboratories, USA
 PCT Int. Appl., 384 pp.
 CODEN: PIXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION: English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005019191	A2	20050303	WO 2004-US27000	20040819
WO 2005019191	A3	20050519		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SL, ST, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: BM, GH, GM, KE, LS, MA, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BF, BG, CA, CZ, DE, DK, EE, ES, FI, FR, GB, GR, GU, IE, IT, LU, MC, MG, ML, MR, NE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GN, GW, GM, ML, MR, NE, SN, TD, TG				
PRIORITY APPL. INFO.: MARPAT 142:280233			US 2003-647490	A 20030825
OTHER SOURCE(S):				



AB Thiadiazinediones I (A = mono- or bicyclic aryl, cycloalkyl, heteroaryl, heterocyclyl; B = (un)substituted 5-oxo-1-cyclopenten-1-yl, 6-oxo-1-cyclohexen-1-yl, 7-oxo-1-cyclohepten-1-yl, 8-oxo-1-cycloocten-1-yl; n = 0-4; R⁶ = H, (un)substituted alkyl, alkenyl, alkynyl; R⁷ = NC, OHC, O₂N, oxo, halo, (un)substituted alkyl, alkenyl, alkynyl, acyloxy, alkoxy, carbonyloxy, etc.), particularly fused dioxothiadiazinyl-substituted phenalenones such as II and their enolate anion salts, are prepared as antiviral agents for the treatment of infections involving RNA-containing viral species such as the hepatitis B and C viruses and HIV. Alkylation of Me phenylacetate with allyl bromide and sodium hydride, hydrogenation of the alkenes, ester cleavage with potassium trimethylsilanolate to yield 2-phenyl-2-propylpentanoic acid, conversion of the acid to the acid chloride and acylation of di-*tert*-butyl malonate, acid-catalyzed cyclodehydration, direct amidation of the ester with 2-aminobenzene-sulfonamide, and cyclocondensation yields II; treatment of II with aqueous sodium hydroxide in acetonitrile:water yields the enolate anion sodium salt of II. [Bis(alkylthio)methylene]cyclohexenediones III (R¹ = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, aminocarbonyl; R² = H, (un)substituted alkyl, alkenyl, alkynyl, alkoxy, carbonyl, aminocarbonyl; R³ = H, NC, OHC, halo, O₂N, (un)substituted alkoxy, acyloxy, aminocarbonyloxy, sulfonyloxy, aminosulfonyloxy, etc.; R⁴ and R⁵ may form (with the carbons to which they are attached) an aryl, heteroaryl, cycloalkyl, cycloalkenyl, or heterocyclyl ring; R¹², R¹³ = alkyl, alkenyl, alkynyl) are claimed. Processes for the preparation of I are also claimed. I inhibit hepatitis C viral RNA polymerase with IC50 values of 2 nM to 500 μM and inhibit hepatitis C replication with EC50 values of between 5 nM and >100 μM. (no data on individual compounds.)

IT 2314-48-9, Dimethyl trithiocarbonate
 RU: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of fused thiadiazinediones, particularly dioxothiadiazinylphenalenones, as antiviral agents for the treatment of infections involving RNA-containing viral species such as hepatitis B and C and HIV)
 RN 2314-48-9 CAPLUS
 CN Carbonotrithioic acid, dimethyl ester (9CI) (CA INDEX NAME)

MeS-C-SMe

L3 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:491305 CAPLUS
DOCUMENT NUMBER: 139:70127
TITLE: Process for modifying surface of polymeric
substrates with photoreactive solutions containing
inorganic photochemical electron donors and their
composites

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE: Jimg, Nanyong; Van Dyke Tiers, George
3M Innovative Properties Company, USA
PCT Int. Appl., 69 pp.
CODEN: PIXXD2

DOCUMENT TYPE:
LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051966	A1	20030626	WO 2002-US33665	20021021
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GR, GU, HK, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: CH, CM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZM, AM, AZ, BY, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003159915	B2	20040622	US 2001-22761	20011214
US 6752894	A1	20030630	AU 2002-353851	20021021
AU 2002353851	A1	20040929	EP 2002-789246	20021021
EP 1461376	A1	20040929	EP 2002-789246	20021021
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, IV, FI, RO, MK, CY, AU, TR, BG, CZ, EE, SK				
JP 200511876	TZ	20050428	JP 2003-552839	20021021
PRIORITY APPL. INFO:			WO 2001-22761	A 20011214
			WO 2002-US33665	W 20021021

OTHER SOURCE(S):
MARPAT 139:70127

AB The process comprises contacting a polymer substrate surface, particularly a fluorinated polymer substrate surface (e.g., ethylene tetrafluoride-propylene hexafluoride copolymer (PTFE 6510N)/nylon 12 (Vestamid L 2140)), with a photoreactive solution containing at least one inorganic photochemical electron donor (e.g., sodium sulfide) and a cationic assistant (e.g., triethylammonium bromide) to form an interface, and exposing the interface to actinic radiation. Polymer substrates with modified surfaces are effectively bonded to polymer films to form composite articles.

IT 534-18-9, Sodium thiocarbonate
RL: TEM (Technical or engineered material use); USES (Uses of photochem. electron donor; process for modifying surface of polymeric substrates with photoreactive solns. containing inorg. photochem. electron donors)

RN 534-18-9 CAPLUS
CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)

HS-C-SH

2 Na

REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L3 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:424513 CAPLUS
DOCUMENT NUMBER: 138:402661
TITLE: Manufacture of polymers of water-soluble vinyl monomers with narrow molecular weight distribution

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE: Hamabe, Hidemori; Ueno, Chie
Kurita Kogyo Co., Ltd., Japan
Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DOCUMENT TYPE:
LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003160604	A2	20030603	JP 2001-361343	20011127
PRIORITY APPL. INFO:			JP 2001-361343	20011127
AB In polymerization of water-soluble vinyl monomers in aqueous solution in the presence of initiators, reversible addition-fragmentation chain-transfer agents are added to the solution. Thus, acrylamide was polymerized at 60° for 8 h in H ₂ O in the presence of (NH ₄) ₂ S ₂ O ₈ and benzyl dithiobenzoate to give a polymer with Mn 34,900 and Mw/Mn 1.42.				
IT 26504-29-0				
RL: RCT (Reactant); NACT (Reactant or reagent)				
(chain-transfer agent; polymerization of water-soluble vinyl monomers in presence of reversible addition-fragmentation chain-transfer agents in narrow mol. weight distribution)				
RN 26504-29-0 CAPLUS				
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)				

Ph-CH₂-S-C-S-CH₂-Ph

L3 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2002:636908 CAPLUS
DOCUMENT NUMBER: 137:188196
TITLE: Separator with sulfur compound thin film for secondary battery and the battery using it

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE: Yamada, Kazunori; Kobayashi, Shigeki; Katmai, Norimitsu; Takita, Kotaro; Kono, Koichi
Tonen Chemical Corp., Japan
Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DOCUMENT TYPE:
LANGUAGE: Patent
Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002237285	A2	20020823	JP 2001-32144	20010208

PRIORITY APPLN. INFO.:
OTHER SOURCE(S): MARPAT 136:18196
JP 2001-32144
JP 2001-32144
20010208

AB The separator has a thin film of 21 S compound selected from R1SR2 (R1-2 = hydrocarbyl), R3SR4 (R3-4 = hydrocarbyl; x = 2-5), R5SR6 (R5-6 = hydrocarbyl), S-containing cyclic compds., and crown ethers on one or both sides of a microporous polyolefin film. Batteries having the separator are also claimed. Since decomposition of electrolyte solns. is suppressed by the S compound thin film, the batteries have low irreversible anode capacity and good cycling performance.

IT 822-38-8, Ethylene trithiocarbonate 930-35-8, Vinylene trithiocarbonate

RT: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(separator with S compound thin film on porous polyolefin film for battery with low irreversible anode capacity and good cycling performance)

RN 822-38-8 CAPLUS
CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)



RN 930-35-8 CAPLUS
CN 1,3-Dithiole-2-thione (9CI) (CA INDEX NAME)



L3 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:353400 CAPLUS
DOCUMENT NUMBER: 136:377478

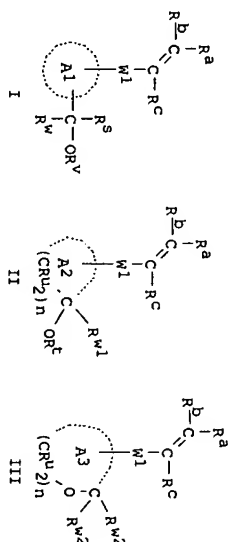
INVENTOR(S): Monomers having electron-withdrawing groups and processes for preparing them
INoue, Keizo
DAIICEL CHEMICAL INDUSTRIES, LTD., JAPAN
SOURCE: PCT Int. Appl., 137 pp.
CODEN: PIXND2

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002036533	A1	20020510	WO 2001-09530	20011031
W: JP, KR, US				
RM: DE, FR, GB				
EP 1331216	A1	20030730	EP 2001-983793	20011031
R: DE, FR, GB				
US 2003059710	A1	20030327	US 2002-181830	20020723
US 6949615	B2	20050927	JP 2000-331602	20001031

PRIORITY APPLN. INFO.:
A 20001031

OTHER SOURCE(S):
GI MARPAT 136:377478
WO 2001-09530
M 20011031



AB Monomers I, II or III (A1, A2, A3 = ring; Ra, Rb, Rc, Ru = H, organic group; Z1 of Rs, Rv, and Rv, Z1 of Rt and Rv1, and Z1 of the two Rv2s = electron-withdrawing group, and the others = H, organic group; W1 = single bond, connecting group; n = 2-25, with the proviso that Z2 of Ra, Rb, Rc, Rd, Re, Rf, Rg, Rh, Ri, Rj, Rk, Rl, Rm, Rn, Ro, Rp, Rq, Rr, Rs, Rt, Ru, Rv, Rv1, Rv2, W1, and the constituent carbon atoms of A1, A2, and A3 may be united to form a ring; Ra, Rb, Rv, Rv1, and Rv2 is a fluorine-containing group or the like) useful as raw material in producing polymers for photoresists are prepared (I, II, III).

Thus, 5-[1,1-disubstituted-2-hydroxy-2-methyl-1-oxo-1,2-dihydro-1,2,4-triazol-5-yl]-1,3-dithiole-2-thione (CAPLUS) was prepared and polymerized in the presence of AIBN.

IT 930-35-8, 1,3-Dithiole-2-thione

RT: RCT (Reactant); RACT (Reactant or reagent)

(preparation of monomers having electron-withdrawing groups and polymers for photoresists)

RN 930-35-8 CAPLUS
CN 1,3-Dithiole-2-thione (9CI) (CA INDEX NAME)



REFERENCE COUNT: 14
THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

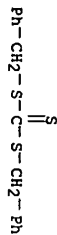
L3 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:263295 CAPLUS
DOCUMENT NUMBER: 135:46510

INVENTOR(S): 60Co γ -irradiation-initiated "living" free-radical polymerization in the presence of dibenzyl trithiocarbonate
Bai, Ru-Ke; You, Ye-21; Pan, Cai-Yuan
Department of Polymer Science and Engineering, University of Science and Technology of China, Hefei, 230026, Peop. Rep. China
Macromolecular Rapid Communications (2001), 22(5), 315-319
CODEN: MRCOE3; ISSN: 1022-1336
WILEY-VCH Verlag GmbH

PUBLISHER: English
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The free-radical polymerization of vinyl monomers in the presence of dibenzyl trithiocarbonate (DBTC) and under 60Co

γ-irradiation is of living character. Under 60Co irradiation, the bonds between benzyl group and sulfur were cleaved, benzyl radicals initiate the polymerization. The propagating radical together with trithiocarbonate radicals form a dormant polymer chain. The fast equilibrium between propagation radical and dormant polymer chain controls the polymerization

IT 26504-29-0P, Dibenzyl trithiocarbonate
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
USES (Uses)
(mechanism of 60Co γ-irradiation-initiated living free-radical polymerization of vinyl monomers with dibenzyl trithiocarbonate)



REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> S L2 NOT L3
L4 225 L2 NOT L3

=> S L4 AND (HARD? OR TOUGH? OR HAR?)

557645 HARD?
94353 TOUGH?
132341 TOU?
832969 HAR?
L5 8 L4 AND (HARD? OR TOUGH? OR HAR?)

=> D 1-8 IDIB ABS HITSTR

L5 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 1982:219353 CAPLUS
DOCUMENT NUMBER: 96:219353
TITLE: Formation of an abrasion-resistant coating film
INVENTOR(S): Kuyama, Masahito; Futagami, Mikiyo
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Fr. Demande, 26 pp.
CODEN: FRXXBL

DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2487324	A1	19820129	FR 1981-14361	19810723
FR 2487324	B1	19840330		
JP 57028166	A2	19820215	JP 1980-102187	19800724
JP 58013102	B4	19830311		
JP 57028167	A2	19820215	JP 1980-102188	19800724
JP 58013103	B4	19830311		
JP 57028168	A2	19820215	JP 1980-102189	19800724
JP 58013104	B4	19830311		
US 4382983	A	19830510	US 1981-283784	19810715
GB 2080817	B2	19840905	GB 1981-22128	19810717
DE 3129298	A1	19820429	DE 1981-3129298	19810724
DE 3129298	C2	19891109		

PRIORITY APPL. INFO.:

JP 1980-102187 A 19800724
JP 1980-102188 A 19800724
JP 1980-102189 A 19800724

AB Alkali metal salts of thio acids, barbituric acids, and/or 1,3-dicarbonyl comds. are catalysts for curing abrasion-resistant hydrolyzed alkoxy silane coatings. Thus, a mixture of partially hydrolyzed (20.2% SiO₂) 100, Bu acrylate-2-hydroxyethyl methacrylate polymer (25% and H2NCOSEK [74379-80-9]) 1 part was coated on poly(ethylene methacrylate) [9011-14-7] at 20° and 50% relative humidity and baked 1 h at 75° to give a coating with appearance good, crosshatch adhesion 100/100, scratching by steel wool none, pencil hardness 7H, and adhesion after 1 h in H₂O at 80° 100/100.

IT 534-18-9
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for curing of abrasion-resistant siloxane coatings)
RN 534-18-9 CAPLUS
CN Carbonotrithiolic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

L5 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 1973:160454 CAPLUS
DOCUMENT NUMBER: 78:160454
TITLE: Preparation of poly(isocyanurate-urethanes)
INVENTOR(S): Allen, Michael George; Tiers, George V. D.
PATENT ASSIGNEE(S): U.S.' 5 pp.
SOURCE: Minnesota Mining and Manufacturing Co.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE
US 3715337 A 19730206 US 1971-148938 19710601
PRIORITY APPL. INFO.: US 1971-148938 A 19710601
AB Polyisocyanurates or poly(isocyanurate-urethanes) were prepared by treating the poly(isocyanurate-urethanes) with polyols in the presence of Na dodecyl trithiocarbonate (1) [40195-97-9].

Thus, 2.3 g Na in 70 g dipropylene glycol (II) [25265-71-8] was treated with 20.2 g n-dodecyl mercaptan (112-55-0) and 7.6 g carbon disulfide (75-15-0) to give a 20% I solution in II. A polyisocyanurate, prepared by treating 10 g Mondur MRS (polymethylene polyphenyl polyisocyanate) [37370-30-2] with 0.2 g of the catalyst solution, cured to hardness after 24 hr at room temperature and after 48 min at 100 deg..

IT 40195-97-9
RL: CAT (Catalyst use); USES (Uses)
(catalysts, for polyisocyanurate preparation)
RN 40195-97-9 CAPLUS
CN Carbonotrithiolic acid, monododecyl ester, sodium salt (9CI) (CA INDEX NAME)

Me-(CH₂)₁₁-S-CS₂H

● Na

L5 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:500847 CAPLUS
DOCUMENT NUMBER: 67:100847
TITLE: Composition comprising chlorinated butyl rubber and a curing system

INVENTOR(S): Bamister, Eric; Biggs, John; Coulson, Samuel H.;
Greenwood, John; Zapp, Robert L.
PATEM ASSIGNEE(S): Esso Research and Engineering Co.
SOURCE: U.S., 4 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATEM INFORMATION:

PATEM NO.	KIND	DATE	APPLICATION NO.	DATE
US 3342789	19670919	US	19620731	

AB Halogenated rubbery polymers having low Mooney viscosity can be cured with suitable curing systems to give mastic compns. with good metal adhesion and hardening properties. Thus, a mastic base composition was obtained by milling together 100 parts chlorinated butyl rubber with 7 parts N,N'-dichloro-5,5-dimethylhydantoin and 0.75 part dicumyl peroxide 10 min. at 300 F. to give a material with Mooney viscosity 10-15 (4 min. at 212 F. large rotor). The mastic base was formulated into a composition containing mastic base 107.75, petroleum resin

25, hydrogenated wood resin ester 10, phenol methylol resin 20, short fiber asbestos 50, CaCO₃ 150, polyisobutylene (mol. weight, approx. 10,000) 10 and light process oil 40 parts. The 2 curing systems tested in the formulation were the suitable curing system: ethylene trithiocarbonate 1, ZnO 5, SnCl₂ 2, salicylic acid 2 parts and the control: 2 parts diethylenetriamine and 5 parts heavy calcined MgO. The adhesion of depolymd. chlorobutyl mixture to Al was 9.7 lb./in. 2 force to sep. 1 in. sq. Al plates in 1 day compared to 5.6 lb./in. 2 for the control. The penetration of the mastic composition was 9.3 mm. after 15 sec. with a 100 g. load using a grease penetrometer compared to 11.9 mm. penetration for the control.

IT 822-38-8

RL: USES (Uses)
(as curing agent in chlorinated butyl rubber mastics)

RN 822-38-8 CAPLUS
CN 1,3-dithiolane-2-thione (9CI) (CA INDEX NAME)



L5 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1965:402735 CAPLUS
DOCUMENT NUMBER: 63:2735
ORIGINAL REFERENCE NO.: 63:441C-e
TITLE: Medical use of S-carboxymethyl cysteine
INVENTOR(S): Joullie, Maurice; Laure, Michel; Mallard, Gabriel;

PATEM ASSIGNEE(S): Muller, Pierre
Recherches Pharmaceutiques et Scientifiques
SOURCE: 14 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATEM INFORMATION:

PATEM NO.	KIND	DATE	APPLICATION NO.	DATE
FR M3111	19650312	FR	19631202	

AB Medications containing S-carboxymethyl cysteine (I), m. 249-50° (decomposition) (prepared by alkylation of cysteine (II) with an alkali metal monochloroacetate) were stable (in contrast to II) and provided trophic action on fingerhalls. The I.D. 50 of I (intravenous in mice) was 3.1 g./kg.; the intraperitoneal I.D. 50 was too low to be determined in mice, rats, guinea pigs, or rabbits. Subacute toxicity detns. in mice or rats revealed no abnormalities. Various topical formulations containing I at 0.5-10% concentration in a penetrating aqueous excipient [containing glycerol monostearate, hydrogenated lanolin, sorbitol, and Tween 80 (sorbitol poly(oxyethylene) monooleate)] are described. These medications also contained Interesterified almond oil, or cholesterol, cholesterol palmitate, thymoxine, or vitamin A palmitate, coloring agents (for the aqueous oil phases), and a quaternary ammonium compound or other preservative (but not Hg derivs., which would react with I). Regular topical application of the medications described to the base of the nails made the nails harder, stronger, and less brittle.

IT 4052-53-3, Zinc thioacetate, ZnCS₃
(protection by polyethylene glycol in viscose in rayon spinning)

RN 4052-53-3 CAPLUS
CN Zinc, [carbonotritrithioato(2-)-S,S']- (9CI) (CA INDEX NAME)



L5 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1963:9490 CAPLUS
DOCUMENT NUMBER: 58:9490
ORIGINAL REFERENCE NO.: 58:1618P-C
TITLE: Curing agents for elastomeric halogenated olefin copolymers

INVENTOR(S): Cain, William P.; Minckler, Leon, Jr. S.; Makowski, Henry S.
PATEM ASSIGNEE(S): Esso Research and Engineering Co.
SOURCE: 4 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
PATEM INFORMATION:

PATEM NO. KIND DATE APPLICATION NO. DATE

PATEM NO.	KIND	DATE	APPLICATION NO.	DATE
US 2996473	19610815	US	19590529	

AB The agents consist of a metal oxide and an organic polythiocarbonate, e.g. ethylene trithiocarbonate (I). The products have better dynamic fatigue and O₃ resistance than those cured with S. Thus, a chlorinated copolymer (made from a 50:50 C2H4-C3H6 feed, containing 8.01% Cl, and having a Harris mol. weight of 40,600) 100 was mixed with semireinforcing furnace black 50, ZnO 5, stearic acid 1, and I 5 parts and cured for 45



mln. at 311°F. Tests in a Goodrich flexometer showed <1/10th as much permanent set and dynamic drift as in a control stock cured with S, tetraethylthiuram disulfide, and benzothiazolyl disulfide. The improvement in O3 resistance was also impressive.

IT 822-38-8, Carbonic acid, trithio-, cyclic ethylene ester
(as curing agent for halogenated polyolefins)

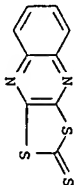
RN 822-38-8 CAPLUS
1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)

L5 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1961:139575 CAPLUS
DOCUMENT NUMBER: 55:139575
ORIGINAL REFERENCE NO.: 55:263539-h
TITLE: Control of mildew
INVENTOR(S): Grewe, Ferdinand; Sasse, Klaus; Wegler, Richard
PATENT ASSIGNEE(S): Farbentfabriken Bayer Akt.-Ges.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1100372		19610223	DE	
AB 2-Phenylthio polyphage, E. Rhizophagogenic fungi, e.g. Ergasilus polyphage, E. humuli, and S. pamosa, are controlled by acylation products of 2,3-quinoxalinedithiol (II), 6-methoxy-1, 6-Me-1, 6-chloro-1, and 5,7-dimethyl. Especially active are compds. prepared by treating the H of the SH groups with esters of chloroformic acid or of thiocarbonyl acid chlorides, or with COCl ₂ or CSOCl ₂ . The activity of 6-methyl-1,3-dithiolol(4,5-b) quinoxalin-2-one and some derivative against E. polyphage is described. The products do not harm plants and also have high acaricidal activity.				

IT 93-75-4, Carbonic acid, trithio-, cyclic 2,3-quinoxalinedithiol ester (in mildew control)

RN 93-75-4 CAPLUS
CN 1,3-Dithiolol(4,5-b) quinoxaline-2-thione (9CI) (CA INDEX NAME)



L5 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1959:7069 CAPLUS
DOCUMENT NUMBER: 53:7069
ORIGINAL REFERENCE NO.: 53:1351b-h
TITLE: Reactions of amines and sulfur with olefins. IV. Chemical and thermal decompositions of N,N'-thiobisamines and their reactions with olefins
AUTHOR(S): Saville, R. W.
SOURCE: Journal of the Chemical Society (1958) 2880-8
CODEN: JCSO49; ISSN: 0368-1769
DOCUMENT TYPE: Journal

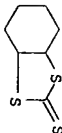
LANGUAGE: Unavailable

AB cf. C.A. 49, 9610C. The procedure of Throdahl and Harman (C.A. 45, 5442g) with (PhCH₂)₂NH and S₂C₁₂ gave 92% ((PhCH₂)₂N)₂S₂C₁₂ (II), yellow needles, m. 75-80° (alc.-petr. ether); morpholine (III) and S₂C₁₂ gave 82% N,N-disulfide (III), needles, m. 125° (EtOH-EtOAc); and N-ethylpyrazine and S₂C₁₂ gave 66% N,N'-disulfide (IV), prisms, m. 77-9° (EtOH-Me₂CO). BzNHCH₂Ph (10 g.) and 5 g. P₂S₅ in boiling xylene gave 52% PhCSNHCH₂Ph (V), m. 84-5°, 3-bromocyclohexene (VI) and (H₂N)₂C₆H₁₀ gave 69% C₆H₉SH, b.p. 44°, n_D 1.5230; 2,4-dinitrophenyl derivative, yellow prisms, m. 114-15° (EtOH-Me₂CO). VI and PhSH in EtOH under N gave C₆H₈SPh, b.p. 88-90°, n_D 1.5920. The procedure of Cummen (C.A. 41, 3447a) gave Ph cyclohexyl sulfide, b.p. 111°, n_D 1.5680; sulfone, m. 73-4°.

Cyclohexene (15 g.), 30 g. PhCH₂SH, and 0.1 g. ascaridole refluxed 7 hrs. gave 45% C₆H₁₁SCH₂Ph (Via), b.p. 81-89°, n_D 1.5556; sulfone, flakes, m. 100-1° (EtOH-petr. ether). 1-Chloro-2-thiocyanatocyclohexene and Na₂S gave a polymer (VII) and not 1,2-epithiocyclohexene; VII and LiAlH₄ gave material, b.p. 148-50°, which contained some 1,2-C₆H₁₀(SH)₂. Benzyl 1-methylcyclohexyl sulfide and AcO₂H gave the sulfone, flakes, m. 100° (petr. ether-EtOH). I (2 g.) and 50 ml. 15% H₂SO₄ shaken vigorously then kept 2 days at 0° gave 2.7 g. ((PhCH₂)₂N)₂S₂C₁₂, prisms, m. 143-4° (EtOH); I and warm dilute mineral acids gave S, H₂S, SO₂, and (PhCH₂)₂NH, and I in C₆H₆ and H₂S gave a red insol. oil and S. III (11.8 g.) and 12.4 g. p-MeC₆H₄SH mixed at room temperature gave 5.8 g. II and 14.9 g. residue, undistillable at 140°/0.01 mm., which apparently was (p-MeC₆H₄)₂S₄; other thiols behaved similarly. I was unaffected by LiAlH₄ in Et₂O after 2 hrs. refluxing; in refluxing tetrahydrofuran degradation to (PhCH₂)₂NH, S, and H₂S occurred. III (3.0 g.), 2.5 g. MeCN, and 20 ml. C₆H₆ heated 8 hrs. in vacuo at 140° gave S and bis(α-methylamino-α-morpholinomethyl) sulfide, prisms, m. 150-1° (EtOH); III and PhCH₂CNS gave the benzyl derivative, plates, m. 98° (C₆H₆). I (9.1 g.) under N kept 24 hrs. at 140 ± 0.1° then treated with Et₂OEt₂ gave (PhCH₂)₂NH·HCl and 6.1 g. V. (PhCH₂)₂NH (VII) 0.3 g. and 2 g. S heated 24 hrs. in vacuo at 140 ± 0.1° then cooled to -10° 2 days gave 4.2 g. V and VII·H₂S, m. 32-4° (sealed tube). IV heated 10 hrs. at 140 ± 0.1 in vacuo gave traces of Et(NCH₂CH₂)₂NH, H₂S and a tar; the same products were obtained from Et(NCH₂CH₂)₂NH and S. I 2,4-(O₂N)₂C₆H₃Me, VIIa, PhCH₂NH₂, and ((PhCH₂)₂N)₂S₂C₁₂, m. 109-11° (petr. ether), and other unidentified cyclohexanedithiol derivs. 1-Methylcyclohexene and I gave similar results. EtCH₂CMe₂ (0.25 mole) and 0.025 mole III stirred at 25° or 65° while diffused with H₂S gave varying amts. of II. From 25 g. MeCH₂CMe(CH₂)₂CH₂CMe₂ and 12.6 g. III heated 1 hr. at 140° was recovered 10.6 g. III; when the same mixture was refluxed 1 hr. under N while diffused with H₂S there was obtained small amts. of II and unidentified sulfides and polysulfides. Cyclohexene (41 g.), 4.8 g. S, and 11.8 g. III heated 5 hrs. in vacuo at 140 ± 0.1° gave 0.6 g. II, 1.2 g. III, and 10.5 g. polysulfide. The mechanisms of the various reactions involved are discussed.

IT 2164-87-6, Carbonic acid, trithio-, 1,2-cyclohexylene ester (preparation of)

RN 2164-87-6 CAPLUS
CN 1,3-Benzodithiole-2-thione, hexahydro- (9CI) (CA INDEX NAME)



L5 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1957:32428 CAPLUS
DOCUMENT NUMBER: 51:32428
ORIGINAL REFERENCE NO.: 51:6205f-h
TITLE: Inhibiting the polymerization of olefinic compounds
PATENT ASSIGNEE(S): General Tire & Rubber Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE
GB 754689 19560808 GB
AB Certain polymers, particularly the solid polymers of olefinic compds. which have substantial residual unsat., continue to polymerize after a polymer of the desired characteristics has been formed. The result is a hardening and gelation of the polymer. Known inhibitors or "shortstops" for high-temperature polymerizations are ineffective for the new latexes synthesized at temps. less than 80°F. The best low-temperature inhibitors are the alkali metal and Mn4 triethiocarbonates. Preferably 0.05-3% of the triethiocarbonate, based on the weight of the polymer, is used as the inhibitor in polyolefinic compds., particularly the rubbery polymers of conjugated diolefinic compds. and other diolefinic compds. having double bonds in the conjugated relation and preferably having less than 7 aliphatic C atoms. When excessive amts. of free radical initiators are used in the polymerization systems, it is desirable to add more of the shortstopping agent. For example, a batch of 1,3-butadiene and styrene was polymerized at 41°F. The batch was shortstopped at the end of the polymerization by the addition of 0.20% Na triethiocarbonate (I). The batch was subjected to further treatment in the polymerizer. At the time of shortstopping the polymerization, the solids content was 22.3%; after treating for 4 hrs., 21.8%; after 12 hrs., 21.3%. When diisopropylbenzene hydroperoxide and triethylenetetramine are used as initiators, 0.30% I is used.
IT 534-18-9, Sodium thiocarbonate, Na2CS3
RN 534-18-9 CAPLUS
CN Carbonotriethiotic acid, disodium salt (9CI) (CA INDEX NAME)

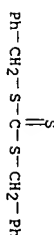


● 2 Na
=> S L4 NOT L5
L6 217 L4 NOT L5
=> S L6 AND (EPOX? OR ACRY? OR METHACR? OR UNSAT?)
308139 EPOX?
450448 ACRY?
255040 METHACR?
L7 257023 UNSAT?
49 L6 AND (EPOX? OR ACRY? OR METHACR? OR UNSAT?)
=> D 1-49 IBIB ABS HITSTR

L7 ANSWER 1 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:32286 CAPLUS
DOCUMENT NUMBER: 144:109097
TITLE: Method for producing molecularly imprinted polymers
INVENTOR(S): Sellergren, Boerje; Tiliaci, M. Magdalena
PATENT ASSIGNEE(S): University of Dortmund INTU, Germany
SOURCE: PCT Int. Appl., 20 pp.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

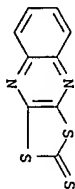
PATENT NO. KIND DATE APPLICATION NO. DATE
WO 2006004536 A1 20060112 WO 2005-SE1096 20050704
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GR, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MK, MN, MW, MX, MY, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VC, VN, YU, ZA, ZM, ZW
RM: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BM, CH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
AI 20060209 DE 2004-102004032430 20040703
PRIORITY APPLN. INFO.: DE 2004-102004032430A 20040703
AB The invention relates to a method for producing mol. imprinted polymers (MIP) which are applied as a thin film to the surface of a support material, in which a suspension of at least one functional monomer, one template and one initiator is used for the polymerization, and with which RAFT agents are employed.
IT 26504-29-0, Dibenzyl triethiocarbonate
RL: MOA (Modifier or additive use); USES (Uses)
RAFT agent; method for producing molecularly imprinted polymers

RN 26504-29-0 CAPLUS
CN Carbonotriethiotic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
L7 ANSWER 2 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1221224 CAPLUS
DOCUMENT NUMBER: 143:460978
TITLE: Hydrogenation or aoxidation of polymer latex prepared by controlled emulsion polymerization
INVENTOR(S): Parker, Dane Kenton; Fisher, Frank James; Mahadevan, Viswanath
PATENT ASSIGNEE(S): U.S. Pat. Appl. Publ., 34 pp.
SOURCE: CODEN: USXXCO
DOCUMENT TYPE: Patent

IT AB
New insecticidal, acaricidal, nematocidal, fungicidal, or antibacterial compo-
93-75-4D, Thioquinox, makes. with benzaldehydes



RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses) (synergistic insecticides, acaricides, nematocides, fungicides, and antibacterial agents containing benzimidazole derivs.)

RN 93-75-4 CAPLUS
CN 1,3-dithiole(4,5-b)quinoxaline-2-thione (9CI) (CA INDEX NAME)

L7 ANSWER 5 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1048469 CAPLUS
DOCUMENT NUMBER: 143:306708
TITLE: Thiocarbonates for chain transfer agents for RAFT polymerization of acrylic acid, polymers obtained, and their applications

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE: Coatex, Fr.
Fr. Demande, 46 pp.
CODEN: FRXBL

DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2868068	A1	20050930	FR 2004-3197	20040329
FR 2868072	A1	20050930	FR 2004-8307	20040728
WO 2005093466	A1	20051013	WO 2005-FR702	20050323
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GE, GH, GM, GR, GU, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
R: BM, CH, CM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BE, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPL. INFO.:

AB MOCOCHEM(S)SCHRIJCO2M2 (R1 = C2-10 alkyl or (C1-4-alkyl-substituted) aryl, M1, M2 = H, amine salt, ammonium, or alkali metal) are manufactured by reaction of Na2CS3 or K2CS3 with MOCOCHEM (M = ammonium or alkali metal, X = halo) and are useful for chain transfer agents in RAFT polym. of acrylic acid (I) in water and copolym. of I with milling aids for mineral materials in aqueous media.

534-18-9, Disodium trithiocarbonate 584-10-1, Dipotassium trithiocarbonate

RL: RCT (Reactant); RACT (Reactant or reagent) (biscarboxyalkyl) trithiocarbonates and salts for chain transfer agents for RAFT polymerization of acrylic acid for polymers useful as dispersants and milling aids for mineral materials)

RN 534-18-9 CAPLUS
CN Carbonotrithiotic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 584-10-1 CAPLUS
CN Carbonotrithiotic acid, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

REFERENCE COUNT: 6
RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT
L7 ANSWER 6 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:921729 CAPLUS
DOCUMENT NUMBER: 143:387401
TITLE: Advances in RAFT polymerization: the synthesis of polymers with defined end-groups

AUTHOR(S): Moat, Graeme; Chong, Y. K.; Postma, Almar; Rizzardo, Ezio; Thang, San H.
CORPORATE SOURCE: CSIRO Molecular Science, Clayton, 3168, Australia
PUBLISHER: Polymer (2005), 46(19), 8458-8468
DOCUMENT TYPE: CODEN: POLMAG; ISSN: 0032-3861
Elsevier Ltd.
LANGUAGE: English
Journal; General Review

AB A review. An overview discussing recent developments in radical polymerization with reversible addition-fragmentation chain transfer (RAFT polymerization). Guidelines for the selection of RAFT agents are presented. The utility of the RAFT process is then illustrated with several examples of the synthesis of polymers with reactive end-groups. Thus, RAFT polymerization with appropriately designed trithiocarbonate RAFT agents is successfully applied to the synthesis of narrow polydispersity carboxy-functional poly(methacrylate) and primary amino-functional polystyrene. Methods for removing the thioalkoxythio end-group by aminolysis, reduction and thermal elimination are discussed. It is shown that the thioalkoxythio end-group can be cleanly cleaved by radical induced reduction with tri-n-butylstannane, to leave a saturated chain end, or by thermolysis, to leave an unsatd. chain end.

15644-49-2, Trithiocarbonate
RL: MSC (Miscellaneous)

(RAFT agents; synthesis of polymers with defined end-groups via RAFT polymerization)
RN 15644-49-2 CAPLUS
CN Carbonotrithioate (9CI) (CA INDEX NAME)



REFERENCE COUNT:

86

THERE ARE 86 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L7 ANSWER 7 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:471844 CAPLUS
DOCUMENT NUMBER: 143:28318
TITLE: Micronized wood preservative formulations
INVENTOR(S): Leach, Robert M.; Zhang, Jun
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S. Ser. No. 821,326.

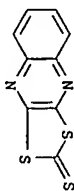
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005118280	A1	20050602	US 2004-970446	20041021
US 2004238767	A1	20041223	US 2004-821326	20040409
PRIORITY APPLN. INFO.:			US 2003-461347P	P 20030409
			US 2003-518994P	P 20031111
			US 2004-821326	A2 20040409
			US 2004-568485P	P 20040506

AB The wood preservative compns. comprising micronized particles. The composition comprises dispersions of micronized metal or metal compds. The wood preservative composition comprises an inorg. component comprising a metal or metal compound and organic biocide. When the composition comprises an inorg. component and an organic biocide, the inorg. component or the organic biocide or both are present as micronized particles. When used for preservation of wood, the micronized particles can be observed as uniformly distributed within the wood and there is minimal leaching of the metal and biocide from the wood.

IT 93-75-4, Tilioglinox
RI: BIU (Biological use, unclassified); TEM (Technical or engineered material use); BIO: (Biological study); USES (Uses)
(micronized wood preservative formulations comprising inorg. metal compds. and organic biocides)

RN 93-73-4 CAPLUS
CN 1,3-Dithio[4,5-b]quinoxaline-2-thione (9CI) (CA INDEX NAME)



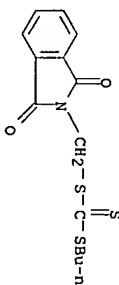
L7 ANSWER 8 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:453896 CAPLUS
DOCUMENT NUMBER: 143:153769
TITLE: Thermolysis of RAFT-Synthesized Polymers. A Convenient Method for Trithiocarbonate Group Elimination

AUTHOR(S): Postuma, Almer; Davis, Thomas P.; Moad, Graeme; O'Shea, Michael S.
CORPORATE SOURCE: CSIRO Molecular Science, Clayton, 3168, Australia
SOURCE: Macromolecules (2005), 38(13), 5371-5374
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Thermolysis provides a simple and efficient way of eliminating trithiocarbonate groups from polymers made by the RAFT [reversible addition-fragmentation chain transfer polymerization] process. For poly(styrene with trithiocarbonate chain end group), [-CH₂CH(C₆H₅)-S-(C=S)S-], the product is a comparatively inert 1,3-diphenylpropenyl chain end group [-CHPhCH=CHPh] which is most likely formed by a concerted elimination mechanism. In the case of poly (Bu acrylate) with chain end [-CH(CO₂Bu)CH₂CH(CO₂Bu)-S-(C=S)S-], the analogous elimination product is not observed. The thermolysis product has a macromonomer chain end [-CH(CO₂Bu)CH₂CH(CO₂Bu)-CH₂] which may arise by consecutive C-S bond homolysis, intra- or intermol. transfer, and β-scission. Thermolysis of the polymers was monitored by thermogravimetric anal., ¹H NMR, and gel permeation chromatog.

IT 19194-21-9
RI: RGT (Reagent); RACT (Reactant or reagent)
(chain transfer agent in RAFT polymerization; thermolysis of trithiocarbonate groups from chain transfer agent)
RN 19194-21-9 CAPLUS
CN Carbonotrithioic acid, butyl (1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)methyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT:

68

THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L7 ANSWER 9 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:906315 CAPLUS
DOCUMENT NUMBER: 142:74889
TITLE: Unexpected end-groups of poly(acrylic acid) prepared by RAFT polymerization

AUTHOR(S):

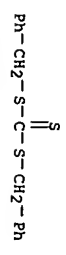
Liandro, Marie-France; Loiseau, Julien; Boisson, Claude; Delorme, Frederic; Ladavere, Catherine; Claverie, J.
CORPORATE SOURCE: Service Commun de Resonance Magnetique Nucleaire de la Federation des Polymeristes Lyonnais, FR2151/Centre National de la Recherche Scientifique (CNRS), Vernaizon, 69390, Fr.

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2004), 42(21), 5439-5462
CODEN: JPACJC; ISSN: 0887-624X
John Wiley & Sons, Inc.
Journal

PUBLISHER: Document Type: English
AB Low-mol.-weight poly(acrylic acid) (PAA) was synthesized by reversible addition fragmentation chain transfer polymerization with a trithiocarbonate as chain-transfer agent (CTA). With a combination of NMR spectroscopy and matrix-assisted laser desorption/ionization time-of-flight mass spectrometry, the PAA end-groups of the polymer were analyzed before and after neutralization by sodium hydroxide. The polymer prior to neutralization is made up of the expected trithiocarbonate chain-ends and of the H-terminated chains issued from a reaction of transfer to solvent. After neutralization, the trithiocarbonates are transformed into thiols, disulfides, thioacetates,

and addn. H-terminated chains. By quantifying the different end-groups, it was possible to demonstrate that fragmentation is the rate limiting step in the transfer reaction.

IT 26504-29-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(Unexpected end-groups of poly(acrylic acid) prepared by RACT polymerization)
RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

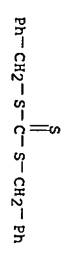
L7 ANSWER 10 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:534013 CAPLUS
DOCUMENT NUMBER: 141:89558
TITLE: Controlled emulsion polymerization
INVENTOR(S): Parker, Dane Kenton; Feher, Frank James; Mahadevan, Viswanath
PATENT ASSIGNEE(S): The Goodyear Tire & Rubber Company, USA
SOURCE: U.S. Pat. Appl. Publ., 30 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004127634	A1	20040701	US 2003-721718	20031125
US 6992156	B2	20060131		
WO 2004060928	A1	20040722	WO 2003-US41104	20031223
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GR, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SI, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: BW, GE, GM, KE, LS, MM, MZ, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GN, GO, GW, ML, MR, NE, SN, TD, TG				
EP 1581562	A1	20051005	EP 2003-814933	20031223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 200582957	A1	20051222	US 2005-186305	20050721
PRIORITY APPL. INFO.:			US 2002-437542P	P 20021231
			WO 2003-US41104	A 20031125
			WO 2003-721718	W 20031223

AB The present invention discloses an emulsion polymerization process that comprises: (1) preparing an aqueous polymerization medium which is comprised of (a) at least one monomer, (b) a polymerization medium which is comprised of an emulsifier, wherein the emulsifier is prepared in-situ within the aqueous polymerization medium; and (2) initiating polymerization of said monomer within the aqueous polymerization medium. The subject invention more specifically reveals an emulsion polymerization process that comprises: (1) preparing a monomer solution which is comprised of (a) at least one monomer, (b) a conjugate acid of a surfactant with a pKa of less than 14, and (c) a controlled free radical polymerization agent; (2) preparing

an aqueous medium which is comprised of (a) water, and (b) a conjugate base of a weak acid wherein the pKa of the base is less than 14; and (3) mixing the monomer solution with the aqueous medium under conditions that result in the

in-situ formation of an emulsifier, and (4) initiating free radical polymerization
IT 26504-29-0, Dibenzyl trithiocarbonate
RL: RCT (Reactant); RACT (Reactant or reagent)
(chain transfer agent; surfactant systems for in-situ emulsification in styrene for controlled emulsion polymerization)
RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



L7 ANSWER 11 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:174985 CAPLUS
DOCUMENT NUMBER: 140:357772
TITLE: Synthesis of Comblike Poly(butyl methacrylate) Using Reversible Addition-Fragmentation Chain Transfer and an Activated Ester

AUTHOR(S): Voslao, Johannes J.; Tonge, Matthew P.; Fellows, Christopher M.; D'Agosto, Franck; Sanderson, Ronald D.; Gilbert, Robert G.

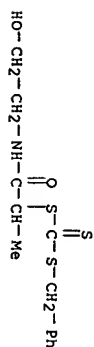
CORPORATE SOURCE: Key Centre for Polymer Colloids, School of Chemistry, University of Sydney, Sydney, NSW 2006, Australia
SOURCE: Macromolecules (2004), 37(7), 2371-2382
CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Comblike polymers of poly(Bu methacrylate) were prepared using an activated ester-type comonomer (N-acryloxysuccinimide, NAS) to generate branch points. The conventional solution free-radical copolymerization of Bu methacrylate (BMA) and NAS were first investigated by following individual monomer consumption rates by ¹H NMR spectrometry and reactivity ratios so obtained are both close to 0.2; the joint confidence interval is also determined. Reversible addition-fragmentation chain transfer (RAFT) was

used to grow polymers with controlled backbone and branch chain length. Because both reactivity ratios have similar values, this implies that the copolymer will have a random distribution of NAS and hence of branch points. RAFT-mediated polymerization was first used to synthesize linear poly(BMA-co-NAS) chains. Primary hydroxy-functionalized RAFT agents were then immobilized on this linear poly(BMA-co-NAS) through nucleophilic substitution on the activated ester units of the NAS. From these immobilized RAFT agents, branches were grown upon addition of a further aliquot of monomer (BMA) and initiator (AIBN). The amount of NAS in the starting BMA/NAS composition varied without adversely affecting the uniformity of the NAS distribution along the resulting linear poly(BMA-co-NAS) backbone. This results in branched polymers whose mol. weight, branching d., and d.p. of branches are all relatively narrow and controlled. 558484-26-7DP, reaction products with Bu methacrylate-N-acryloxysuccinimide copolymer
RL: PEP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis, mol. weight, and NMR spectra of comblike poly(Bu

RN	558484-26-7	CAPLUS
CN	Carbonocitric acid, 2-[(2-hydroxyethyl)amino]-1-methyl-2-oxoethyl phenylmethyl ester (9CI)	(CA INDEX NAME)



REFERENCE COUNT:

74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L7 ANSWER 12 OF 49 CAPLUS COPYRIGHT 2006 ACS on STNTR
ACCESSION NUMBER: 2003:841654 CAPLUS

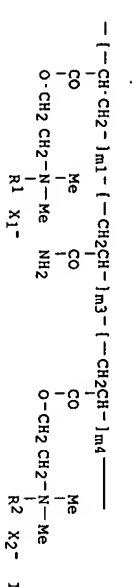
TITLE:

INVENTOR(S) :

PATENT ASSIGNEE(S): Hubei University, Peop. Rep. China
SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 11 pp.

DOCUMENT TYPE:	Patent
LANGUAGE:	Chinese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1385376	A	20021218	CN 2002-115577	20020614
PRIORITY APPLN. INFO.:				
CN 2002-115577				
20020614				



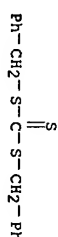
AB The cationic polymer flocculating agent having general formula (1), where: R1=m-4-16 alkyl or quaternary NH⁺ group; R2=0-1-4 alkyl group; X1=Br; X2=Cl; m1, m4=2-105; m3=2-107; and m2=6, is prepared by allowing react (methacryloyloxyethyl)dimethylammonium X- with diethyl triethiocarbonate, at a molar ratio of 1:0.30-2.5X10-3, in H2O at 50-70° for 2-24 h to obtain emulsifier; and then allowing to react with polyacrylamide and (methacryloyloxyethyl dimethylammonium X- in solvent (such as H2O, cyclohexane, white oil, aviation kerosene, n-BuOH, and/or isosamyl alc.) in the presence of nonionic emulsifier (such as Span-60, Span-20, Tween-20, or Tween-80) and azobisisobutyronitrile) at 50-80° for 5-24 h.

IT 26504-29-0, Diethyl triethiocarbonate

RL: NNU (Other use, unclassified); RCT (Reactant); RAQT (Reactant or reagent); USES (Uses)

(cationic polymer flocculating agent with high performance in water treatment and its preparation)

RN	26504-29-0	CAPLUS
CN	Carbonotrithioic acid, bis(phenylmethyl) ester (9CI)	(CA INDEX NAME)



17 ANSWER 13 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:661417 CAPLUS
DOCUMENT NUMBER: 139:381630
TITLE: Synthesis of polymethinotetra

TITLE: Synthesis of polymethinetetrafulvalenes by dimerization of ω -(1,3-dithiol-2-ylidene

polyenals with the Lawesson-reagent.
Carotinoid and supracarotinoid tetrathiafulvalenes

AUTHOR(S) : Maerkl, Gottfried; Aschenbrenner, Norbert; Baur,

CORPORATE SOURCE:

SOURCE: Helvetica Chimica Acta (2003), 86(7), 2589-2609
CODEN: HCHIMA; ISSN: 0010-010X

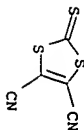
PUBLISHER:
DOCUMENT TYPE:

OTHER SOURCE(S):

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

The determination of aldehydes via their unstable thioaldehydes giving 1,3-dithianes, which undergo sulfur extrusion to give alkenes is used for a new, general synthesis of tetrafluoroalkenes with polymethine species. In the presence of the Lawesson reagent, the 2-(ω -xopolyenyldiene)-1,3-dithiol-4,5-dicarbonyl trifiles I [X1 = (CH₃:CH:n(E)-all; R1 = CN; n = 0 - 5) and II {X2 = (CHMe:CHCn:CHCn:CMeCh:n(E)-all; R1 = CN; n = 0, 1] and the ω -(1,3-benzodithiol-2-yliden) polymethylene I {X1 = (CH:CH:n(E)-all; R1R1 = CH:CHCn:CH; n = 0, 1) can be dimerized via the thioaldehydes. The aldehydes I [X1 = (CH:CH:n(E)-all; R1 = CN; n = 0 - 5) and II {X2 = (CHMe:CHCn:CHCn:CMeCh:n(E)-all; R1R1 = CN; n = 0 - 5) and II {X2 = (CHMe:CHCn:CHCn:CMeCh:n(E)-all; R1R1 = CH:CHCn:CH; n = 0, 1) are obtained by reaction of the unsaturated aldehydes [all-(E)-OHC(CH:CH)nCHO, n = 0 - 5], 2,7-dimethylhepta-2,4,6-trienal and croceindialdehyde with 1 mol of 2-thioxo-1,3-dithiole-4,5-dicarbondiulfide and 2 mol of triphenylphosphine. The ω -(1,3-benzodithiol-2-yliden) polymerates I {X1 = (CH:CH:n(E)-all; R1R1 = CH:CHCn:CH; n = 0 - 5) and II {X2 = (CHMe:CHCn:CHCn:CMeCh:n(E)-all; R1R1 = CH:CHCn:CH; n = 0, 1) were prepared by the Wittig reaction of the dialdehydes with 1 mol of (1,3-benzodithiol-2-yl)tributylphosphoniumtetrafluoroborate. Starting from the corresponding aldehydes I {X1 = (CH:CH:n(E)-all; R1 = CN; n = 0 - 5) and II {X2 = (CHMe:CHCn:CHCn:CMeCh:n(E)-all; R1 = CN; n = 0, 1), the polymethineacetylenetetrafluoroalkenes III {X1 = (CH:CH:n(E); R1 = CN; n = 3) and IV {X2 = (CHMe:CHCn:CHCn:CMeCh:n(E); R1 = CN; n = 0, 1) with conjugated 16 and 32 polymethine chains become available, which we call catenoid and supercatenoid tetrafluoroalkenes. The benzodithiol-2-yliden) acetaldehyde I {X1 = (CH:CH:n(E); R1R1 = CH:CHCn:CH; n = 0) and -butenal I {X1 = (CH:CH:n(E); R1R1 = CH:CHCn:CH; n = 1) are dimerized to give the tetrafluoroalkenes III {X3 = bond, (CH:CH)n(E); n = 0, 1} with 4 and 8 methine C-atoms, resp.. In case of



II [X2 = (CHCMe:CHCH:CHCMe)n(E)-all; R1 = CN; n = 0, 1], the
 Wessason method fails, the dimer IV [X2 = (CHCMe:CHCH:CHCMe)n(E)-all;
 R1 = CN; n = 1] with 16 methine C-atoms can be obtained from II [X2 =
 (CHCMe:CHCH:CHCMe)n(E)-all; R1 = CN; n = 1] via the McMurry
 reaction. The intermediate thioaldehydes can be intercepted by the
 formation of Diels-Alder adducts with hexachlorocyclopentadiene and
 hexa-2,4-diene. The redox potentials E1/2 of the described
 polymethine-tetrathiafulvalenes are reported.
 IT 1005-10-3, 2-Thioxo-1,3-dithiole-4,5-dicarbonitrile
 R1: RCT (Reactant); RACT (Reactant or reagent)
 (preparation, half-wave reduction potential, and UV spectra of carotenoid
 and
 supracarotenoid tetrathiafulvalenes by dimerization of
 w-(1,3-dithiole-2-ylidene) polymethine with the
 Wessason-reagent)
 RN 1005-10-3 CAPLUS
 CN 1,3-Dithiole-4,5-dicarbonitrile, 2-thioxo- (9CI) (CA INDEX NAME)

REFERENCE COUNT: 48

THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN

DOCUMENT NUMBER: 2003-532695 CAPLUS

TITLE: 139-101540

INVENTOR(S):

Aqueous dispersions of polymer particles
 Such, Christopher Henry; Rizzardo, Ezio; Serrells,
 Algridas Kazimeras; Hawke, Brian Stanley; Gilbert,
 Robert Goulston; Ferguson, Christopher James; Hughes,
 Robert John
 University of Sydney, Australia
 PCT Int. Appl., 90 pp.

PATENT ASSIGNEE(S):

UNIVERSITY OF SYDNEY, AUSTRALIA

PCT Int. Appl., 90 pp.

CODEN: PIXXD2

Patent

English

Patent

English

Patent

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Patent

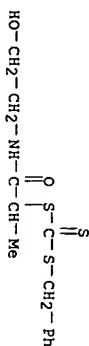
English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 200305919	A1	20030710	WO 2002-AU1735	20021220
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GR, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, NI, TD, TG				
CA 2470822	AA	20030710	CA 2002-470522	20021220
AU 2002350285	A1	20030715	AU 2002-350285	20021220
EP 1463765	A1	20041006	EP 2002-784927	20021220
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002015285	A	20041116	BR 2002-15285	20021220
JP 200513252	T2	20050512	JP 2003-556449	20021220

CN 1625571 A 20050608 CN 2002-827521 20021220
 ZA 2004004992 A 20050215 ZA 2004-4992 20040624
 PRIORITY APPL. INFO.: AU 2001-9708 A 20011221
 AU 2002-950772 A 20020814
 WO 2002-AU1735 W 20021220

MARPAT 139:101540

OTHER SOURCE(S):
 AB The invention provides a method for preparing an aqueous dispersion of
 polymer particles comprising the following steps: (i) preparing a
 dispersion having a continuous aqueous phase, a dispersed organic phase
 comprising one or more ethylenically unsatd. monomers, and an
 amphiphilic RAFT agent such as an adduct of 2-[(2-
 phenylethanesulfonyl)sulfanyl]propanoic acid and acrylic acid-Bu
 acrylate block copolymer as a stabilizer for said organic phase, and
 (ii) polymerizing said one or more ethylenically unsatd.
 monomers under the control of said amphiphilic RAFT agent to form said aqueous
 dispersion of polymer particles, novel amphiphilic RAFT agents
 for use in this method, novel RAFT agents useful in making these
 amphiphilic RAFT agents and methods for their manufacture. Use of the
 amphiphilic RAFT agent allows performing conventional emulsion
 polymer without need of conventional surfactants.
 IT 558484-26-7P, Benzyl 2-[(2-hydroxyethyl)amino]-1-methyl-2-oxoethyl
 trithiocarbonate
 R1: IMF (Industrial manufacture); PREP (Preparation)
 (amphiphilic RAFT agent precursor; manufacture of aqueous dispersions of
 polymers of ethylenically unsatd. monomers as
 amphiphilic RAFT agents)
 RN 558484-26-7 CAPLUS
 CN Carbonotrithiotic acid, 2-[(2-hydroxyethyl)amino]-1-methyl-2-oxoethyl
 phenylmethyl ester (9CI) (CA INDEX NAME)



HO-CH2-CH2-NH-C-CH-NH2

IT 558484-25-6P, 2-amino-1-methyl-2-oxoethyl butyl trithiocarbonate

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT

(Reactant or reagent)

(amphiphilic RAFT agent precursor; manufacture of aqueous dispersions of

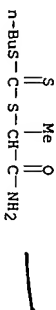
polymers of ethylenically unsatd. monomers as

amphiphilic RAFT agents)

RN 558484-25-6 CAPLUS

CN Carbonotrithiotic acid, 2-amino-1-methyl-2-oxoethyl butyl ester (9CI) (CA

INDEX NAME)



n-Bus-C-S-CH-C-NH2

IT 558484-25-GDP, 2-amino-1-methyl-2-oxoethyl butyl trithiocarbonate,

reaction products with polymers of ethylenically unsatd

. monomers

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT

(Reactant or reagent)

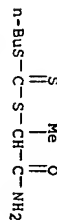
(manufacture of aqueous dispersions of polymer particles using adducts

of dithiocarbonylates and polymers of ethylenically

unsatd. monomers as amphiphilic RAFT agents)

RN 558484-25-6 CAPLUS

CN Carbonotrithioic acid, 2-amino-1-methyl-2-oxoethyl butyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

I7 ANSWER 15 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:491304 CAPLUS
DOCUMENT NUMBER: 139:70097
TITLE: Process for modifying polymer surfaces with inorganic compounds to improved adhesion to other materials

INVENTOR(S): Jing, Naiyong; Van Dyke Tiers, George
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051965	A1	20030626	WO 2002-053352	20021021
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GH, GM, GR, GU, HK, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003162022	A1	20030828	US 2001-23271	20011214
US 6844030	B2	20050118		
AU 2002360288	A1	20030630	AU 2002-360288	20021021
EP 1453896	A1	20040908	EP 2002-795536	20021021
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 200511875	T2	20050428	JP 2003-552838	20021021
PRIORITY APPL. INFO.:			US 2001-23271	A 20011214
			WO 2002-053352	W 20021021

AB In the title process, the inorg. compds. are nonvolatile photochem. electron donor salts and are applied as soles. In the presence of actinic radiation. Polymeric substrates with modified surfaces are effectively bonded to polymer films to form composite articles. Thus, FEP X6307 (tetrafluoroethylene-hexafluoropropylene copolymer) film was contacted with a glass slide flood coated with a solution containing 0.2 g Na2S.9H2O and 6 g H2O while being irradiated by UV light (λ 254 nm) for 10 min. The resulting treated film exhibited advancing contact angle 78° and peel adhesion 3.5 lb/in after thermally bonded with nylon 12 film.

IT 534-18-9, Sodium thiocarbonate
RU: NUU (Other use, unclassified); USES (Uses) (modifying polymer surfaces with inorg. nonvolatile photochem. electron salts in presence of UV radiation to improved adhesion to other materials)

RN 534-18-9 CAPLUS

CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

I7 ANSWER 16 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:411926 CAPLUS
DOCUMENT NUMBER: 139:8231
TITLE: Water-thinned anticorrosive coatings with good storage stability and steel materials coated therewith

INVENTOR(S): Sasaki, Motohiro; Saito, Koichi; Morishita, Atsushi; Takahashi, Akira
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan; Nippon Steel Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKKXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 200315454	A2	20030530	JP 2001-353753	20011119
PRIORITY APPL. INFO.:			JP 2001-353753	20011119
AB The coatings contain (a) 5-30% (as solid) water-thinned polymer dispersions, (b) 0.1-20% silica particles, and (c) 0.01-5% guanidine compds. Thus, a water-thinned composition containing (a) a reaction product of kanephinol RD 5 (acrylic polymer), hydroxydioxibis(triethanolaminate)litanium, (b) Snowtex N (silica), and (c) dipropoxybis(triethanolaminate)litanium, thiourea, and secondary ammonium phosphate was applied on a galvanized steel plate and baked to give a coated plate with improved adhesion and good solvent and alkali resistance.				
IT 822-38-8, Ethylene trithiocarbonate				
RU: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)				
(water-thinned coatings with good corrosion, solvent, and alkali resistance for steel materials)				
RN 822-38-8 CAPLUS				
CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)				



RN 35444-20-3 CAPLUS
CN Carbonotrithioic acid, monoethyl ester, potassium salt (9CI) (CA INDEX NAME)

Et-S-CS2H

● K

L7 ANSWER 17 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:41923 CAPLUS
DOCUMENT NUMBER: 139:8228
TITLE: Water-thinned anticorrosive coatings with good storage stability and steel materials coated therewith
INVENTOR(S): Sasaki, Motohiro; Saito, Koichi; Morishita, Atsushi; Takahashi, Akira
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan; Nippon Steel Corp.
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKKXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003155451	A2	20030530	JP 2001-353750	20011119

PRIORITY APPL. INFO.:
OTHER SOURCE(S): MARPAT 139:8228
AB The coatings contain (a) 5-30t (as solid) water-thinned polymer dispersions, (b) 0.1-20t silica particles, and (c) 0.01-20t organic titanates. Thus, a water-thinned composition containing (a) a reaction product of

Kanebiniol KD 5 (acrylic polymer), hydrogenated bisphenol A diglycidyl ether, and 3-glycidioxypropylmethyldimethoxysilane, (b) Snoutex N (silica), and (c) dipropoxybis(trimethanolamino)titanium, thiourea, and secondary ammonium phosphate was applied on a galvanized steel plate and baked to give a coated plate with improved adhesion and good solvent and alkali resistance.

IT 822-38-8, Ethylene trithiocarbonate 35444-20-3
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(water-thinned coatings with good corrosion, solvent, and alkali resistance for steel materials)

RN 822-38-8 CAPLUS
CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)



RN 35444-20-3 CAPLUS
CN Carbonotrithioic acid, monoethyl ester, potassium salt (9CI) (CA INDEX NAME)

Et-S-CS2H

● K

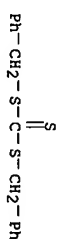
L7 ANSWER 18 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:250866 CAPLUS
DOCUMENT NUMBER: 138:402225
TITLE: Synthesis and Characterization of Poly(acrylic acid) Produced by RAFT Polymerization. Application as a Very Efficient Dispersant of CaCO₃, Kaolin, and TiO₂

AUTHOR(S): Loiseau, J.; Doeert, N.; Suu, J. M.; Egge, J. B.; Llauro, M. F.; Ladauere, C.; Claverie, J.
CORPORATE SOURCE: UMR 2142, CNRS/Bio Mérieux Systèmes Macromoléculaires et Immunovirologie Humaine E.N.S.-L., Lyon, 69364, Fr.
SOURCE: Macromolecules (2003), 36(9), 3066-3077
CODEN: MAMOBX; ISSN: 0024-9297
PUBLISHER: American Chemical Society
JOURNAL: Journal of Polymer Science Part A: Polymer Chemistry

AB Poly(acrylic acid), PAA, was prepared by controlled radical polymerization with reversible addition-fragmentation chain transfer. Using trithiocarbonic acid (dibenzyl ester and trithiocarbonic acid di(1-phenylethyl) ester as chain transfer agents (CTA), the polymerization is controlled for low ratios [AA]:[CTA]. At higher ratios, the polymerization is plagued by transfer to solvent. Transfer to polymer is also detected at high conversion, as shown by the presence of branches in NMR spectroscopy. In its neutralized form, PAA chains are not all terminated by a thiol end group, as shown by elemental anal., thiol titration, and MALDI TOF MS. Finally, dispersion of CaCO₃, kaolin, and TiO₂ using these PAA reveals that the dispersion characteristics are significantly improved using low-

polydispersity PAA.
IT 26504-29-0, Dibenzyl trithiocarbonate
RL: MOA (Modifier or additive use); USES (Uses)
(chain transfer agents; preparation of poly(acrylic acid) by reversible addition-fragmentation chain transfer polymerization in presence of)

RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 51

THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 19 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:242025 CAPLUS
DOCUMENT NUMBER: 138:238561
TITLE: Transition metal superoxides as catalysts for free radical polymerization
INVENTOR(S): Benicewicz, Brian C.; Kanagasabapathy, Subbareddy; Sudalai, Arumugam
PATENT ASSIGNEE(S): Rensselaer Polytechnic Institute, USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXKCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003060577	A1	20030327	US 2002-102542	20020320

US 675076

B2 20040720

US 2001-277173P P 20010320

REFERENCE COUNT:

34

THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

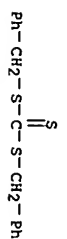
OTHER SOURCE(S): MARPAT 138:238561
Transition metal superoxides of formula $M(O_2)_n$, where M is a transition metal and n is equal to the valence of M, may be used as initiators for free radical polymerization, optionally, under conditions of living polymerization, with or without chain transfer agents. Polymers produced have a narrow mol. weight distribution and low polydispersity indexes when chain transfer agents and/or mol. weight controlling agents are used.

IT

26504-29-0
RL: NUU (Other use, unclassified); USES (Uses)

(chain transfer agent; free radical polymerization in the presence of transition metal superoxide catalysts and chain transfer agents)

RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT:

17

THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 20 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:134483 CAPLUS

DOCUMENT NUMBER: 138:356282

TITLE: Block copolymers of acrylic acid and butyl

acrylate prepared by reversible addition-fragmentation chain transfer polymerization; synthesis, characterization, and use in emulsion polymerization
Galliard, Nicolas; Guyot, Alain; Clavier, Jerome
Laboratoire de Chimie et Procédés de Polymérisation, Centre National de la Recherche Scientifique, Ecole de Chimie Physique Electronique de Lyon, Centre National de la Recherche Scientifique, Villeurbanne, Fr.
Journal of Polymer Science, Part A: Polymer Chemistry (2003), 41(5), 684-698
CODEN: JPACJC; ISSN: 0887-624X
John Wiley & Sons, Inc.

SOURCE:

PUBLISHER: English
DOCUMENT TYPE: Journal

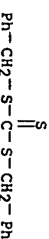
AB Amphiphilic block copolymers of poly(acrylic acid-b-Bu acrylate) (I) were prepared by reversible addition-fragmentation chain transfer polymerization in a one-pot reaction. I were characterized by NMR, static and dynamic light scattering, tensiometry, and size exclusion chromatog. The aggregation characteristics of I corresponded to those theor. predicted for a star molecule. In a Bu acrylate-Me methacrylate emulsion copolymer, low amts. of I could stabilize the latexes with solid contents up to 50%.

IT

26504-29-0
RL: CAT (Catalyst use); USES (Uses)

(chain transfer agent; in preparation of acrylic acid-Bu acrylate block copolymer by RAFT polymerization)

RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 34
THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 21 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:114352 CAPLUS

DOCUMENT NUMBER: 138:304570

TITLE: Living free radical polymerization with reversible addition-fragmentation chain transfer (RAFT polymerization): approaches to star

AUTHOR(S):

Mayadunne, Roshan T. A.; Jeffery, Justine; Moad, Graeme; Rizzardo, Ezio
CSIRO Molecular Science, Clayton South, 3169, Australia

SOURCE: Macromolecules (2003), 36(5), 1505-1513
CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

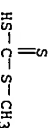
AB The synthesis of multiaarm star polymers by radical polymerization with reversible addition-fragmentation chain transfer (RAFT) is described. When the precursor RAFT agents to star polymers are trithiocarbonate derived, fragmentation of the radical intermediate can lead to different products depending on the leaving abilities of the two groups attached to sulfur. To demonstrate this, two types of RAFT agents, ones that allow growth of arms away from the core and the other attached to the core during propagation, were designed, and an example of each was synthesized. While both star RAFT agents gave excellent mol. weight control and low polydispersities (typically <1.2), the one that grows its arms away from the core offers polymers free from star-star coupled products. Thus, the direction of fragmentation should be considered when designing efficient star RAFT agents. The living nature of the arms of these polymers was demonstrated by extending the arms with a different monomer to afford a star block copolymer. The RAFT agents described are easily synthesized from com. available reagents by a simple exptl. procedure.

IT

42764-37-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(RAFT agent synthesis; living free radical polymerization with reversible addition-fragmentation chain transfer for synthesis of star polymers)

RN 42764-37-4 CAPLUS
CN Carbonotrithioic acid, monomethyl ester, sodium salt (9CI) (CA INDEX NAME)



Na

REFERENCE COUNT:

40

THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 22 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:778028 CAPLUS

DOCUMENT NUMBER: 137:295192

TITLE: A method of treating the surface of a substrate polymer useful for graft

INVENTOR(S): Polymerization
Kambouris, Peter; Whitaker, Michael; Davis, Tom;
Blakey, Idriss; Day, Gary
PATENT ASSIGNEE(S): Polymerac Pty. Ltd., Australia
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION: 1

PATENT NO. KIND DATE APPLICATION NO. DATE
WO 2002079305 A1 20021010 WO 2002-NU416 20020328
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GR,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NO, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VN, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
CI, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CG, CF, CI, CM, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2003088028 A1 20030508 US 2002-109777 20020328
US 6858309 B2 20050222 EP 2002-112637 20020328
EP 1383828 A1 20040128 AU 2001-4048 A 20010328
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPL. INFO.: AU 2001-4048 W 20020328
WO 2002-RU416

AB Radicals are generated on functional and/or backbone portions of polymers forming part of a solid phase surface and/or sub-surface to generate a substrate for initiation of polymerization. The polymerization is conducted in the presence of a control agent which induces a dynamic population of anchored growing (in a controlled manner) and dormant polymeric chains each comprising 22 monomers. Polymers generated by this process include homopolymers and copolymers (comprising 22 monomers including terpolymers) such as inter alia block, graft, tapered, crosslinked and branched polymers. The substrate PMH 6100 was irradiated from Co-60 source, treated with TEMPO control agent, washed and dried, and graft polymerized with styrene at 80° for 16 h.
IT 26504-29-0, Dibenzyli trihydrocarbonate
Rt: CAT (Catalyst use); USES (Uses)
(Irradiation of a nonfunctional substrate polymer for graft agents)
polymerization with styrene in the presence of one or more control agents)
RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

Ph-CH₂-S-C-S-CH₂-Ph
REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT
I7 ANSWER 23 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2002:734987 CAPLUS
DOCUMENT NUMBER: 138:24997
TITLE: Living free radical polymerization under a constant source of gamma radiation - an example of

AUTHOR(S): reversible addition-fragmentation chain transfer or reversible termination?
Quinn, John F.; Barner, Leonie; Davis, Thomas P.; Thang, San H.; Rizzardo, Ezio
CORPORATE SOURCE: Centre for Advanced Macromolecular Design, School of Chemical Engineering and Industrial Chemistry, University of New South Wales, Sydney, 2052, Australia
SOURCE: Macromolecular Rapid Communications (2002), 23(12), 717-721
CODEN: MRCE3J; ISSN: 1022-1336
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
JOURNAL: English

DOCUMENT TYPE: English
AB The primary mechanism for living polymerization under a source of gamma radiation at low dose rates is shown to be reversible addition-fragmentation chain transfer. This was demonstrated by showing that the initial transfer step determines the success of the polymerization. When an inappropriate leaving group is chosen for the RAFT agent, the polymerization is non-living. Under a reversible termination mechanism the "living"-ness should be independent of this initial transfer step.
IT 26504-29-0, Dibenzyli trihydrocarbonate
Rt: RCT (Reagent); RACT (Reactant or reagent)
(Chain transfer agent; addition-fragmentation chain transfer mechanism of living radical polymerization initiated by gamma radiation)
RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)

Ph-CH₂-S-C-S-CH₂-Ph
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT
I7 ANSWER 24 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2002:696025 CAPLUS
DOCUMENT NUMBER: 137:233074
TITLE: Method for controlled free radical polymerization of acrylic acid and salts thereof, resulting low-polydispersity polymers, and their uses
INVENTOR(S): Suan, Jean-Marc; Egretz, Jean-Bernard; Claverie, Jerome; Ladvieere, Catherine
PATENT ASSIGNEE(S): Cortec S.A.S., Fr.
SOURCE: PCT Int. Appl., 107 pp.
DOCUMENT TYPE: Patent
FAMILY ACC. NUM. COUNT: 1
LANGUAGE: French
PATENT INFORMATION: 1

PATENT NO. KIND DATE APPLICATION NO. DATE
WO 2002070571 A1 20020912 WO 2002-FR722 20020228
W: BR, CA, CO, CZ, ID, KR, MX, NO, PL, RU, SK, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE, TR
FR 2821620 A1 20020906 FR 2001-2848 20010302
FR 2821620 B1 20030627
CA 2438158 AA 20020912 CA 2002-2438158 20020228
EP 1377615 A1 20040107 EP 2002-713002 20020228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI, CY, TR

BR 2002007799 A 20040323 BR 2002-7799 20020228
NO 2003003846 A 20030929 NO 2003-3846 20030829
US 2004097674 A1 20040520 US 2003-468398 20031231
PRIORITY APPLN. INFO.: FR 2001-2848 A 20010302
WO 2002-FR1722 W 20020228

AB Polymers of acrylic acid or its salts having

polydispersity 42 and gel content at conversion >90% are manufactured by free-radical polymerization in the presence of RXC(S)SR' (X = O or S, R = a group causing stabilization of RX function by CX, R' = a group such that the R'S bond is a CS bond) as chain-transfer agents. A typical chain-transfer agent was manufactured by reaction of 8.8 g K

O-octylthiocarbonate 20 min at 15° with di-Et

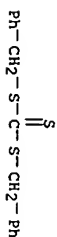
2-bromo-2-methylmalonate in water in the presence of Aliquat 336.

IT 26504-29-0

RI: NUU (Other use, unclassified); USES (uses)
(chain-transfer agents based on dithioesters for acrylic acid and its salts for manufacture of polymers with very low

polydispersity)

RN 26504-29-0 CAPLUS
CN Carbonotrithiotic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 25 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:637892 CAPLUS

DOCUMENT NUMBER: 137:17126

TITLE: Water-thinned coating composition for treating metal surface

INVENTOR(S): Sasaki, Motohiro; Saito, Koichi
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan
PCT Int. Appl., 30 pp.

SOURCE: CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002064856	A1	20020822	WO 2002-JP1214	20020214
RM: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR	AZ	20020828	JP 2001-37605	20010214

PRIORITY APPLN. INFO.: JP 200241957 JP 2001-37605 A 20010214

AB Title coating composition with good anticorrosion, elec. conductivity, and adhesion

comprises (A) aqueous dispersing resins 5-30 (solids content), (B) silica fine particles (e.g., Showtex N 1-10, (C) thiocarbonyl compds. (e.g., thionates) 0.02-5, and (D) phosphate ions 0.01-0.5 wt%, wherein A are obtained by neutralizing 230% of carboxyl groups with potassium ions in an ethylene-unsatd. carboxylic acid copolymer containing 10-30 wt% of the unsatd. carboxylic acid (e.g., Primacor 5801) and then reacting the water-dispersed ionomer resin with epoxy compds. (e.g., Denacol 313).

IT 822-38-8 Ethylene trithiocarbonate
RI: MOA (Modifier or additive use); USES (uses)
(as inhibitor in water-thinned coating composition for treating metal surface)

RN 822-38-8 CAPLUS
CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 26 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:204126 CAPLUS

DOCUMENT NUMBER: 136:402101

TITLE: Photo-initiated living free radical polymerization in the presence of dibenzyl trithiocarbonate

AUTHOR(S): Wang, Jian
You, Ye-Zi; Hong, Chun-Yan; Bai, Ru-Ke; Pan, Cai-Yuan;

CORPORATE SOURCE: State Key Lab of Fire Science, Department of Polymer Science and Engineering, University of Science and Technology of China, Hefei, 230026, Peop. Rep. China

SOURCE: Macromolecular Chemistry and Physics (2002), 203(3), 477-483
CODEN: MCHPES; ISSN: 1022-1352

PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal

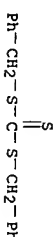
LANGUAGE: English

AB The polymers of styrene (St), Me acrylate (MA), and Bu acrylate (BMA), carried out under UV irradiation at room temperature in the presence of dibenzyl trithiocarbonate (DBTC) were found to display living free-radical polymerization characteristics as evidenced by: narrow mol. weight distribution, linear increase of mol. weight with increasing conversion, well-controlled mol. weight, and first-order polymerization kinetics. The triblock copolymer, PMMA-*b*-St-PMMA, with narrow polydispersity and well-defined structure was successfully prepared using PMMA-*b*-St-PMMA as macro-photoinitiator under UV irradiation at room temperature. Based on GPC, NMR and FT-IR analyses, the structures of the polymers were obtained and the mechanism of the polymerization was proposed.

IT 26504-29-0P, Dibenzyl trithiocarbonate

RI: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (uses)

RN 26504-29-0 CAPLUS
CN Carbonotrithiotic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 27 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:806178 CAPLUS

DOCUMENT NUMBER: 136:86101

TITLE: Controlled polymerization of acrylic acid under 60Co irradiation in the presence of dibenzyl trithiocarbonate
HONG, Chun-Yan; YOU, Ye-Zi; BAI, Ru-Ke; PAN, Cai-Yuan; Borjhan, Gereltu

CORPORATE SOURCE:

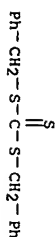
Department of Polymer Science and Engineering,
University of Science and Technology of China, Hefei,
230026, Peop. Rep. China
Journal of Polymer Science, Part A: Polymer Chemistry
(2001), 39(22), 3934-3939
CODEN: JPACCC; ISSN: 0887-624X
John Wiley & Sons, Inc.

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:

AB The polymerization of acrylic acid (AA) was performed under
60Co irradiation in the presence of dibenzyl trithiocarbonate at room
temperature,
and well-defined poly(acrylic acid) (PAA) with a low
polydispersity index was successfully prepared. The gel permeation
chromatog. and IR NMR data showed that this polymerization displays
living free-radical polymerization characteristics: a narrow mol. weight
distribution ($M_w/M_n = 1.07-1.22$), controlled mol. weight, and constant
chain-radical concentration during the polymerization. Using PAA-S-C(=S)-S-PAA
as an initiator, the extension reaction of PAA with fresh AA was carried
out under 60Co irradiation, and the results indicated that this extension
polymerization displayed controlled polymerization behavior.

IT 26504-29-0, Dibenzyl trithiocarbonate
RL: CAT (Catalyst use); USES (Uses)
(polymerization catalyst; controlled gamma ray-induced
polymerization of acrylic acid in presence of dibenzyl
trithiocarbonate)

RN 26504-29-0 CAPUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT:

36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 28 OF 49 CAPUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2001:578597 CAPUS
DOCUMENT NUMBER: 135:124156
TITLE: Bactericide combinations in detergents
INVENTOR(S): Elmore, Richard; Houghton, Mark Phillip
PATENT ASSIGNEE(S): Robert McBride Ltd., UK
SOURCE: Brit. UK Pat. Appl., 53 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2354771	A1	20010404	GB 1999-23253	19991001
PRIORITY APPL. INFO.:			GB 1999-23253	19991001
AB The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Crecured 50, (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5, detergent enzyme savinase 0.2, and bactericide pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing reduction activity after contact 2. 534-18-9 Rt: BU (Biological) use, unclassified); NDU (Other use, unclassified); BIOL (Biological study); USES (Uses)				

(bactericide combinations in detergents)
RN 534-18-9 CAPUS
CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)



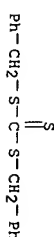
● 2 Na

L7 ANSWER 29 OF 49 CAPUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2001:556450 CAPUS
DOCUMENT NUMBER: 135:273266
TITLE: A novel approach to triblock copolymers: 60Co
gamma-irradiation-induced copolymerization in the
presence of a trithiocarbonate macroinitiator

AUTHOR(S):
CORPORATE SOURCE:

SOURCE:

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE: English
Journal
AB Triblock copolymers were prepared under 60Co gamma-irradiation in the
presence of a trithiocarbonate macroinitiator. The triblock copolymers,
PSt-PMA-PSt and PMA-PSt-PMA have well-defined structures, controlled mol.
weight and narrow mol. weight distribution. The mechanism of block copolym.
is discussed.
IT 26504-29-0DP, Dibenzyl trithiocarbonate, reaction products with
poly(Me acrylate) or polystyrene
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);
USES (Uses)
(Me acrylate-styrene triblock copolymer preparation by gamma
ray-induced polymerization in presence of trithiocarbonate
macroinitiator)
RN 26504-29-0 CAPUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT:

51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 30 OF 49 CAPUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2001:463752 CAPUS
DOCUMENT NUMBER: 135:195878
TITLE: Controlled Radical Polymerization of
Acrylic Acid in Protic Media
Ladavere, Catherine; Doerr, Nicole; Claverie, Jerome
P.
LCP CPE/CNRS 43, Villaurbane, 69616, Fr.
Macromolecules (2001), 34(16), 5370-5372

CODEN: MAMOBX; ISSN: 0024-9297
American Chemical Society

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:

English
Journal

AB Various dithio esters were prepared and screened for their suitability as chain transfer agents in the title polymerization

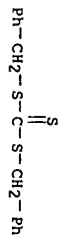
attack of guanidine), mitochondrial damage as well as its antiproteoal activity were examined. Synthesis of olitipraz is presented.

IT 930-35-8, 1,3-dithiole-2-thione
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOD (Biological study); USES (Uses)

RT: RCT (Reactant); RACT (Reactant or reagent)
(chain transfer agent; controlled radical polymerization of acrylic acid in protic media using dithio compds. as chain transfer agents)

RN 930-35-8 CAPLUS
CN 1,3-dithiole-2-thione (9CI) (CA INDEX NAME)

RN 26504-29-0 CAPLUS
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 31 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:101125 CAPLUS
DOCUMENT NUMBER: 134:157573

L7 ANSWER 32 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:613535 CAPLUS
DOCUMENT NUMBER: 133:335522
TITLE: Living free radical polymerization with reversible addition - fragmentation chain transfer (the life of RAFT)

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE: RCT Int. Appl., 109 pp.
CODEN: PIXXDZ
Patent
English

CORPORATE SOURCE:
SOURCE: Polymer International (2000), 49(9), 993-1001
CODEN: PLITER; ISSN: 0959-8103
John Wiley & Sons Ltd.

DOCUMENT TYPE:
LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:
AB Free radical polymerization with reversible addition-fragmentation chain transfer (RAFT polymerization) is discussed with a view to answering the following questions: (a) How living is RAFT polymerization. (b) What controls the activity of thiocarbonylthio compds. in RAFT polymerization. (c) How do rates of polymerization differ from those of conventional radical polymerization. (d) Can RAFT agents be used in certain RAFT polymerizations. Retardation, observed when high concns. of certain RAFT agents are used and in the early stages of emulsion polymerization, and how to overcome it by appropriate choice of reaction conditions, are considered in detail. Examples of the use of thiocarbonylthio RAFT agents in emulsion and miniemulsion polymers are provided.

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

MO 2001009118
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, FT, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ

A2 20010208
A3 20011122

MO 2000-1B1146

20000728

RM: DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, CA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2000064625
US 2004053989

A5 20010219
A1 20040318

AU 2000-64625
US 1999-145964P

20000728
20030702

PRIORITY APPLN. INFO.:

US 1999-302
IE 2000-304
US 2000-198338P
US 2000-627641
MO 2000-1B1146

A 19990729
A 20000413
P 20000418
B1 20000728
W 20000728

OTHER SOURCE(S):
MARPAT 134:157573

AB The invention provides methods to treat neurol. disorders such as Alzheimer's disease, or to slow the progression of such diseases, or to treat and/or prevent other disorders as disclosed in the specification, by administering to patients, or delivering to the tissues of such patients, olitipraz or related 1,2-dithiole-3-thiones. The effects of olitipraz on Aβ1-42 neurotoxicity, oxidative stress, removal of iron from tissues, localization of 8-hydroxyguanosine (predominantly derived from -OH



L7 ANSWER 32 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:613535 CAPLUS
DOCUMENT NUMBER: 133:335522
TITLE: Living free radical polymerization with reversible addition - fragmentation chain transfer (the life of RAFT)

AUTHOR(S):

CORPORATE SOURCE:

SOURCE:

PUBLISHER:

DOCUMENT TYPE:

LANGUAGE:

AB Free radical polymerization with reversible addition-fragmentation chain transfer (RAFT polymerization) is discussed with a view to answering the following questions: (a) How living is RAFT polymerization. (b) What controls the activity of thiocarbonylthio compds. in RAFT polymerization. (c) How do rates of polymerization differ from those of conventional radical polymerization. (d) Can RAFT agents be used in certain RAFT polymerizations. Retardation, observed when high concns. of certain RAFT agents are used and in the early stages of emulsion polymerization, and how to overcome it by appropriate choice of reaction conditions, are considered in detail. Examples of the use of thiocarbonylthio RAFT agents in emulsion and miniemulsion polymers are provided.

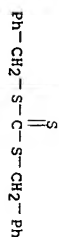
IT 26504-29-0

RL: NIU (Other use, unclassified); USES (Uses)

(chain transfer agent; living free radical polymerization with reversible addition-fragmentation chain transfer)

RN 26504-29-0 CAPLUS

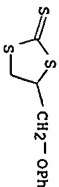
CN Carbonotrithioic acid, bis(phenylmethyl) ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 31 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:13136 CAPLUS
DOCUMENT NUMBER: 132:180905

IT 10414-73-0P
RU: SPN (Synthetic preparation); PREP (Preparation)
RU: Synthesis and reaction of polymers bearing 5-membered cyclic
dithiocarbonate group)
RU 10414-73-0 CAPLUS
CN 1,3-Dithiolane-2-thione, 4-(phenoxymethyl)- (9CI) (CA INDEX NAME)



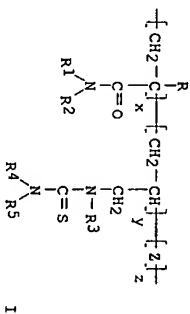
L7 ANSWER 36 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:108062 CAPLUS
DOCUMENT NUMBER: 120:108062
TITLE: Preparation of high-molecular-weight
acrylamide polymers with good water
solubility
INVENTOR(S): Putagami, Masahito; Nakayama, Michiko
PATENT ASSIGNEE(S): Showa Denko Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKKXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE
JP 05230141 A2 19930907 JP 1992-32196 19920219
PRIORITY APPL. INFO.: JP 1992-32196 19920219
AB Title polymers are prepared by polymerization of
acrylamide (I) or its mixts. with other comonomers in aqueous medium
in the presence of polymerization initiators and ethylene
trithiocarbonate, phenothiazine (II), and/or thionicotinamide. Thus,
2,258 2,2'-azobis(2-amidinopropane) 2HCl salt aqueous solution 5, 0.45%
triethanolamine aqueous solution 5, and 0.09% (NH4)2S2O8 aqueous solution 5 g
were quickly and successively mixed with 980 g a mixture of 50% aqueous solution (pH
7.0) of I 360, acrylic acid 45, and II 0.00011 g and kept
overnight to give a powdered copolymer (mol. weight 1250 + 104) with good
water solubility
IT 822-38-8, Ethylene trithiocarbonate
RT: USES (Uses)
(use of, in preparation of high mol. weight and water-soluble acrylamide
polymers)
RN 822-38-8 CAPLUS
CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)

L7 ANSWER 37 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:60231 CAPLUS
DOCUMENT NUMBER: 112:60231
TITLE: Polymers depressants for sulfide minerals
INVENTOR(S): Lipp, David W.; Nagata, D. R.
PATENT ASSIGNEE(S): American Cyanamid Co., USA
SOURCE: U.S., 10 pp.

DOCUMENT TYPE: CODEN: USXXAM
LANGUAGE: Patent
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION: English

PATENT NO. KIND DATE APPLICATION NO. DATE
US 4866150 A 19890912 US 1988-182681 19880418
EP 338276 A2 19891025 EP 1989-105098 19890320
EP 338276 A3 19900905
EP 338276 B1 19940518
R: DE, ES, GB, NL, SE
ES 2053842 T3 19940801 ES 1989-105098 19890320
BR 8901808 A 19891128 BR 1989-1808 19890414
CA 1338110 A1 19960305 CA 1989-596738 19890414
AU 8933109 A1 19891019 AU 1989-33109 19890417
AU 614600 B2 19910905
ZA 8902802 A 19891227 19890417
RU 2004342 19931215 1989-461892 19890417
US 4888106 C1 19891215 1989-363235 19890608
US 4888106 A 19891215 1988-182681 A 19880418
PRIORITY APPL. INFO.:
GI



AB Acrylamide copolymer with allylthiourea are effective
depressants for sulfide minerals in froth flotation of complex ores, and
are suitable for separation of pyrite and pyrrhotite as Fe-rich gangue
minerals. The polymer structure is based on I having R, R1,
and/or R2 as H or Cl-4 alkyl groups; R3 as H, Cl-4 alkyl, or aryl; R4 and
R5 as H, Cl-4 hydrocarbon, and/or aryl; Z is the polymerization residue
of a monomer; and x = 20-99.0, y = 1.0-30.0, and z = 0-50.0 mol. %. The
polymer mol. weight is 103-106. The copolymer is optionally used
with a surface-modifying agent and does not require high pH values. The
monomers in Z are selected from acrylonitrile, styrene, or a
cationic complex (especially diallyldimethylammonium chloride); acrylic
, methacrylic, or maleic acids; or alkali metal salts or alkyl
esters of the acids. Thus, a solution of acrylamide 9.0 and
N-allylthiourea 1.0 dissolved in water 90 parts by weight was stirred for 30
min, heated to 50° under N, treated with aqueous (NH4)2S2O8 as the
polymerization initiator, and reacted for 3 h. The resulting copolymer
containing 6 mol% of allylthiourea showed mol. weight approx 50,000. A similar
copolymer having mol. weight approx 6000 was tested at 0.80 lb/ton in froth
flotation for cleaning of chalcopyritic ore concentrate containing 28.0 Cu and
3.15% Mo. The ore slurry included NaHS (a standard depressant) at 1.3 lb/ton
solids, and was conditioned in 5 min. The flotation recovery of Mo was
82.6% at the concentrate grade of 21.1%, compared with 78.8-95.4 at 14.2-24.3%
using only the standard NaHS at 3.7-6.87 lb/ton that required 15-min
conditioning and was sensitive to oxidation by air in approx 2 min during the
flotation.

IT 90980-77-1 534-18-9, Sodium trithiocarbonate
RL: PROC (Process)
(floatation depressants with polymer and, for sulfide ores)
RN 90980-77-1 CAPLUS
CN Propanoic acid, 3-[(dithiocarboxy)thio] - (9CI) (CA INDEX NAME)

HO₂C-CH₂-CH₂-S-CS₂H

RN 534-18-9 CAPLUS
CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

L7 ANSWER 38 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1986:200224 CAPLUS
DOCUMENT NUMBER: 104:200224
TITLE: Selenium and sulfur compounds for treating drug

INVENTOR(S): Revici, Emanuel
PATENT ASSIGNEE(S): Avram, Elena, USA
SOURCE: U.S., 4 pp.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION: English

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4565690	A	19860121	US 1985-722493	19850412
WO 8605978	A1	19861023	WO 1985-US699	19850418
EP 217793	A1	19870415	EP 1985-902309	19850418
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
CA 1282337	A1	19910402	CA 1986-506562	19860414
PRIORITY APPL. INFO.: US 1985-722493				
AB Drug addiction in humans, particularly the symptoms of withdrawal, is treated by administration of a lipid-soluble compound containing bivalent neg.				
Se or S to counteract the effects of abnormal fatty acids produced in addicted individuals. Examples of such compounds are organic selenides, Se-containing fatty acids, selenized or sulfurized oils, thiosulfates, organic lipid sulfides, disulfides, or mercaptans, thiolglycerols, and thiolglycols.				
IT 822-38-8				
RL: BIOL (Biological study)				
(In drug addiction treatment)				
RN 822-38-8 CAPLUS				
CN 1,3-Dithiolane-2-thione (9CI) (CA INDEX NAME)				



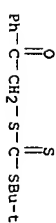
L7 ANSWER 39 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1983:35521 CAPLUS
DOCUMENT NUMBER: 98:35521
TITLE: Epoxy resin thermosetting compositions
PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57102922	A2	19820626	JP 1980-178451	19801217
JP 63012094	B4	19880317	JP 1980-178451	19801217

PRIORITY APPL. INFO.:
AB Thermosetting comps. comprising cationically polymerizable organic substances, nonnucleophilic Lewis acids (or onium salts of strong acids), and tertiary alc. carboxylates, organic peroxides, thioacetyl derivatives, organic

polyanilides, metal acetylacetonates, aromatic-substituted vicinal diols, Pb peroxides, quinone derivatives, and/or C6H5IO are polymerizable in a short time to give cured products with good properties. Thus, a mixture of ERL-422 [25085-98-7] 100, S-(ethoxycarbonylmethyl)tetramethylenesulfonium hexafluoroarsenate [84139-20-8] 3, and 2,3-dichloro-5,6-dicyanquinone (I) [84-58-2] 3 parts gelled in 5 s at 150°, compared with 6 min when I was omitted.

IT 71988-71-1
RL: CAT (Catalyst use); USES (Uses)
(crosslinking catalysts, with nonnucleophilic Lewis acids, for epoxy resins)
RN 71988-71-1 CAPLUS
CN Carbonotrithioic acid, 1,1-dimethylethyl 2-oxo-2-phenylethyl ester (9CI) (CA INDEX NAME)



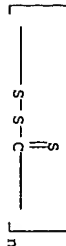
L7 ANSWER 40 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1972:565831 CAPLUS
DOCUMENT NUMBER: 77:165831
TITLE: Delayed-action vulcanization accelerator system
INVENTOR(S): Strail, Raymond C.; Taylor, Ray D.
PATENT ASSIGNEE(S): Goodrich, B. F., Co.
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3692719	A	19720919	US 1970-96926	19701210
CA 946092	A1	19740423	CA 1971-128025	19711118
JP 51028110	B4	19760817	JP 1971-100102	19711210

PRIORITY APPL. INFO.:
AB A blocked isocyanate-polythiocarbonate mixture was a delayed

action accelerator for unsatd. rubbers. Thus, an SBR-butadiene rubber vulcanization mixture containing polythiobarbionate [32198-31-5] and the reaction product of toluene diisocyanate [26471-62-3] and dimethylamine [124-40-3], milled at 150 deg. F for 5 min and then vulcanized at 360 deg. F, had a cure time of 1.60 and a scorch time of 0.62 compared with 2.75 and 1.30 for the mixture vulcanized in the absence of the blocked isocyanate and polythiobarbionate.

IT 32198-31-5
RT: USES (uses)
LANGUANGE: (vulcanization on accelerator systems containing)
RN 32198-31-5 CAPLUS
CN Poly(dithiocarbonothioyl) (9CI) (CA INDEX NAME)



[Handwritten signature]

L7 ANSWER 41 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1971:13972 CAPLUS
DOCUMENT NUMBER: 74:13972
TITLE: Effect of heat aging resistance on the chemical structure of polyepichlorohydrin rubber
AUTHOR(S): Mori, Kuntio; Nakamura, Yoshiro
CORPORATE SOURCE: Fac. Eng., Iwate Univ., Morioka, Japan
Kogyo Kagaku Zasshi (1970), 73(7), 1515-19
SOURCE: CODEN: KKGZAT; ISSN: 0368-5462

DOCUMENT TYPE: Japanese
LANGUANGE: Japanese
GI For diagram(s), see printed CA Issue.
AB Polyepichlorohydrin rubber was vulcanized for intensifying the heat-aging resistance by new vulcanizing agents, i.e., Na2S, 9H2O-S, H2NCH2CH2NH2-H2S3-MgO-S, Na2CS3-S, and KSCN-MeCON-Me2. The relation of crosslinking structure to heat-aging resistance of the vulcanized rubbers was studied. The heat-aging resistance of the vulcanizates was compared with that of a vulcanizate containing H2NCH2CH2CH2NH2-MgO (I). The above-mentioned vulcanizing agents produced the crosslinking structures -S2-3-, -NHCH2CH2NH-, -SC(S)S-, and II, resp. The rubbers produced were phys. stronger than I, which gave a rigid vulcanizate with low elongation and superior heat-aging resistance.
IT 534-18-9
RT: USES (uses)
LANGUANGE: (chloropropylene rubber crosslinked by, heat-aging properties of)
RN 534-18-9 CAPLUS
CN Carbonotrithioic acid, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

L7 ANSWER 42 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:436968 CAPLUS
DOCUMENT NUMBER: 69:36968
TITLE: Electron-microscopic investigations on rayon fiber surfaces. I. Preparation technique for surface

AUTHOR(S): replicas of wet fibers
CORPORATE SOURCE: Groebe, Anneliese; Maron, Reinhard; Rose, Klaus Peter
Deut. Akad. Wiss. Berlin, Teltow-Seehof, Fed. Rep. Ger.
SOURCE: Faserforsch. und Textiltechnik (1968), 19(6), 253-8
CODEN: FSTXAF; ISSN: 0014-8628
Journal

DOCUMENT TYPE: German
LANGUANGE: German
AB The surface modifications on filaments due to spinning processes were investigated by electron microscopy. Usual techniques of sample preparation were unsatisfactory, since the vacuum required for a C/Pt deposition evaporated the water from the swollen fiber and destroyed the original structure. The problem was solved by exchanging the water of swelling with glycerol (I). Treating the sample with I stopped the effects of the spinning bath. Onto the I-swollen sample was deposited C/Pt and this coated with polystyrene. The fibers were then dissolved with 72% H2SO4 and the protective film dissolved with CHCl3. Results supported a coating of ZnS and ZnCS3, as postulated by Klare (1960) and Goetze (1960), which was deposited during the filament formation and again destroyed by the spinning bath. 23 references.

IT 4052-53-3
RT: USES (uses)
LANGUANGE: (coatings from zinc sulfide and, on rayon for electron microscopy)
RN 4052-53-3 CAPLUS
CN Zinc, [carbonotrithioato(2-)-S,S']- (9CI) (CA INDEX NAME)



L7 ANSWER 43 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:69892 CAPLUS
DOCUMENT NUMBER: 68:69892
TITLE: Low-molecular-weight mastics
INVENTOR(S): Baldwin, Francis P.; Pavlick, Michael A.; Mueckler, Leon S., Jr.; Auda, Richard S.; Bamister, Eric
PATENT ASSIGNEE(S): Esso Research and Engineering Co.
SOURCE: Fr., 10 pp.
CODEN: FRXXAK
DOCUMENT TYPE: Patent
LANGUANGE: French
FAMILY AC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1488452	FR	19670713		
DE 1595573	DE			
GB 1128105	GB			

PRIORITY APPL. INFO.:
US 19650609
19651203

AB Easily manipulatable mastics are prepared by halogenating low-mol.-weight, weakly unsatd. polymers and vulcanizing the halogenated polymer in the presence of various stabilizing, vulcanizing, and accelerating agents. Thus, a copolymer containing 94.6 mole % isobutylene and 5.1 mole % isoprene was prepared by polymerizing the monomers 20 min. at -56.5° in the presence of EtAlCl2 in hexane. The polymer solution was chlorinated at ambient temperature to give a polymer having number-average mol. weight 9.30 and containing 6.13 mole % Cl. The chlorinated polymer 100, carbon black 50, SnCl2.2H2O 2.5,

and 1,4-butanedithiol 2 parts was vulcanized for 30 min. at 90° and aged for 4 days to give a mastic having 100t modulus 26 kg./cm.2, tensile strength 52.3 kg./cm.2, and 240t elongation. The mastic could also contain brominated polymer, clay, diluting oil, BuSnCl3 or Bu2SnCl2, salicylic acid, and (or) oxydibenzyle mercaptan, glycol dimercaptoacetate, Zn trimethylene dimercaptilide, Bu2SnS, ethylene trithiocarbonate, tetraethylenepentamine, or N,N'-dibutylthiourea.

IT 822-38-8
RL: USES (Uses)
(as crosslinking agent for chlorinated isoprene-2-methylpropene polymers)

RN 822-38-8 CAPLUS
CN 1,3-dithiolane-2-thione (9C1) (CA INDEX NAME)



L7 ANSWER 44 OF 49 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 1967:421475 CAPLUS
DOCUMENT NUMBER: 67:21475
TITLE: Organic sulfur compounds (heterocycles and primers).

AUTHOR(S): IXIII. Chemistry of thio-cyclohexanones
Morgenstern, Johannes; Mayer, Roland
Tech. Univ., Dresden, Germany
Journal fuer Praktische Chemie (Leipzig) (1966),
34(1-4), 116-38
CODEN: JPCEAO; ISSN: 0021-8383

DOCUMENT TYPE: German
LANGUAGE: CASREACT 67:21475
OTHER SOURCE(S): For diagram(s), see printed CA issue.
AB CA 66: 37084u, 94784w. Thio-cyclohexanone (I) exists in tautomeric forms, the red oxo form (Ia), b1.5-55-63°, n20D 1.5351, and the colorless enol form (Ib), b27-8 70-1°, n20D 1.5290. On standing Ia lost its red color and formed a dimer and a polymer. The

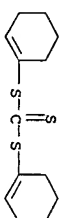
trimer, m. 102-3°, was formed by acid catalysts or by strongly polar solvents, but not by self-polymerization. Ib did not polymerize as readily. The K salt (II) of Ib formed colorless leaflets, hydrolyzed readily and when heated with water formed Ia. Hg salts were relatively unstable. II reacted with alkyl halides or with diazoalkanes in absolute ether to form thio ethers, which are stable to bases, but which hydrolyze with heating to Ia and mercaptans. The following sulfides (IIa) were prepared (R and b.p./mm. given): Et, 86-7°/17-18 (n20D 1.5171); iso-Pr, 90-1°/12-13 (n20D 1.5074); benzyl, 123-6°/0.9-1° (m. 26-9°); Ph3C, - (m. 106-8°); CH3CO2Et, 102-3°/0.8-1.0 (n20D 1.5083); CH3CH2CO2Et, 148-50°/1.9-2.0 (n20D 1.5088); CH3CO2Et, 94.5-5°/0.8-0.9 (n20D 1.5013); CH3CH2OH, 103-5°/1.2-1.3 (n20D 1.5417); CH2CH2CN, 120-2°/1.1-1.3 (n20D 1.5327); CH2CH2Br, 90-1°/0.8-1.0 (n20D 1.5640). Reaction of II with 1,2-dibromoethane produced IIa [R = β-(1-cyclohexen-1-ylthio)ethyl], m. 16-20°. Reaction of II with 2,4-dinitrochlorobenzene produced IIa [R = 2,4-(O2N)2C6H3], m. 160-1°. Ac2O, ClCO2Et, BzCl, diphenylacetyl chloride, and ClCH2COCl (III) reacted with II to form thio esters (IIIs) of Ib resp., as follows (R and b.p./mm. given): Ac, 60.5-63°/0.4-0.6 (n20D 1.5230); EtO2C, 75-6°/0.4-0.5 (n20D 1.5050); Bz, 140-3°/0.3-0.7 (n20D 1.5972); Ph2CHCO-, (m. 49-51°); ClCH2CO, 92-5°/0.7-0.8 (n20D 1.5453). The thio ester of III reacted with more II to produce IIa [R = (1-cyclohexen-1-ylthio)acetyl], b0.9-1.0 175-6°. Thiophosgene reacted with II to produce 47% di-1-cyclohexen-1-yl trithiocarbonate, m. 58-9°. Addition of Ib to epoxides proceeded readily. Addition

to cyclohexene oxide produced IIa [R = 2-hydroxycyclohexyl], b1.2-1.4 134-5°, n20D 1.5461. Addition of ethylene oxide (IV) formed IIa [R = CH2CH2OH], b1.4-1.5 111-13°, n20D 1.5400, which by heating 48 hrs. with concentrated H2SO4 produced 2,2-pentamethylene-1,3-oxathiolane, b1.5-1.7 66-7°, n20D 1.5168. Excess IV produced IIa [R = CH2CH2OCH2CH2OH], b1.2-1.4 139-43°. Reaction of I with cyclohexene sulfide yielded IIa [R = 2-mercaptopcyclohexyl] (V), b0.42 135-8°. The derivative of which with 2,4-dinitrochlorobenzene m. 105-7°. V after keeping 24 hrs. changed to 2,2-pentamethylene-trans-4,5-tetramethylene-1,3-dithiolane, m. 78-80°. Ethylamine reacted smoothly with I to form 2,2-pentamethylene-1,3-thiazolidine, b2.0-2.2 89-90°, n20D 1.5410, which was benzoylated to give 3-benzoyl-2,2-pentamethylene-1,3-thiazolidine, m. 136-8.5°. Warming II with CS2 in absolute benzene and subsequently heating with benzyl bromide produced (1-cyclohexen-1-yl)benzyl trithiocarbonate, m. 32-3.5°. Reaction of I with phenyl isocyanate produced S-1-cyclohexen-1-yl phenylthiocarbamate, m. 163-4°. Reaction of I with diphenylketene produced S-1-cyclohexen-1-yl diphenylthioacetate m. 49-52°. In alkaline solution I yielded no benzal derivs., but in benzenesulfonic acid and benzene with BzH it produced first 1,3-dibenzal-2-cyclohexanone, m. 117-19°. Upon removal of this and concentrating, benzaldehyde di-1-cyclohexen-1-yl mercaptal, m. 128-30°, precipitated. Upon using nitrobenzaldehyde the corresponding nitro compound, m. 152-3°, was produced. By heating I with tetramethylthiuram disulfide, dimethylammonium dimethylthiocarbamate was produced, which was filtered off and the filtrate concentrated to yield 30% 4,5-tetramethylene-1,3-dithiole-2-thione, m. 81-3°. Reaction of I with aniline in dioxane gave cyclohexanone phenylamine, b1.4-1.6 105-8°, n20D 1.5585, and with phenylhydrazine gave cyclohexanone phenylhydrazine, m. 73-6°. Similarly, the oxime and semicarbazone of cyclohexanone were prepared. Piperidine with I produced piperidinocyclohexene, b3-5 93.5-95°, n20D 1.5146. I was hydrolyzed in hot water to cyclohexanone. Alcoholysis of I with absolute EtOH and p-toluenesulfonic acid yielded cyclohexanone diethyl ketal, b18-19 82-3°. I and H2S gave 1,1-dimercapto-cyclohexane, b2.3 62-3°. n20D 1.5449. Mesh gave 1-mercaptop-1-(methylthio) cyclohexane (VI), b1.1-1.2 65.5-67°, n20D 1.5451, and similarly 1-mercaptop-1-(ethylthio) cyclohexane, b0.2-0.4 67-9°. (CH2SH)2 gave deep red 1-mercaptop-1-(β-mercaptopethylthio) cyclohexane (VII), b1.3-1.6 68-90°. Treatment of VI with diazomethane produced 1,1-bis(methylthio) cyclohexane (VIII), b2.3-2.5 96-8°, n20D 1.5388. Similarly, treatment of VII with diazomethane followed by permanganate oxidation to yield the trisulfone, 2,4,7-trithia-3,3-pentamethyleneoctane 2,2,4,4,7,7-hexoxide, m. 117-20°. A mixture of VI and benzylmercaptan in benzene with p-toluenesulfonic acid yielded 1-methylsulfonyl-1-benzylsulfonyl-cyclohexane, m. 137-40°. Heating I with malononitrile produced cyclohexyldimaleononitrile. Reduction of I with Al amalgam in moist ether yielded cyclohexylmercaptan, m. 147-9°. Reduction of I with absolute EtOH, sulfur, and Et3N produced 3,3,5,5-bis(pentamethylene-1,2,4-erithiolane, m. 49-50°. Reduction of II with N-bromosuccinimide in absolute benzene yielded 1,2,3,4,5,6,7,8-octahydrodibenzothioephene b1-1.5 122-5°, which crystallized to a colorless solid, m. 29-31°.

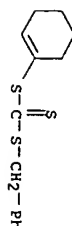
IT

RL: SPN (Synthetic Preparation); PREP (Preparation)

RN 15786-88-6 CAPLUS
CN Carbanic acid, trithio-, di-1-cyclohexen-1-yl ester (8C1) (CA INDEX NAME)



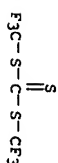
RN 15786-95-5 CAPLUS
CN Carbonic acid, trithio-, benzyl 1-cyclohexen-1-yl ester (8CI) (CA INDEX NAME)



L7 ANSWER 45 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:19057 CAPLUS
DOCUMENT NUMBER: 64:19057
ORIGINAL REFERENCE NO.: 64:3446e-f
TITLE: Tetrafluorothiazane
AUTHOR(S): Brasen, W. R.; Cripps, H. N.; Bottomley, C. G.; Farlow, M. W.; Krespan, C. G.
CORPORATE SOURCE: E. I. du Pont de Nemours & Co., Inc., Wilmington, DE
SOURCE: Journal of Organic Chemistry (1965), 30(12), 4188-93
CODEN: JOCEMH; ISSN: 0022-3263

DOCUMENT TYPE: Journal
LANGUAGE: English

OTHER SOURCE(S): CASREACT 64:19057
AB Pure tetrafluorothiazane has good stability to heat and ultraviolet light. Free-radical attack occurs at S with ring opening. The radical intermediate so formed can participate efficiently in chain reactions by adding to an olefin, attacking another molecule of tetrafluorothiazane, or abstracting H from a substrate. Ring opening is also induced by nucleophiles, but by attack on C rather than S. This can result in cycloaddn. reactions with unsatd. mols. such as ketones or formation of thioacetic acid deriva. with stronger bases. Aluminum chloride, a powerful electrophile, causes unusual isomerization and condensation reactions.
IT 461-08-5, Carbonic acid, trithio-, bis(trifluoromethyl) ester (preparation of)
RN 461-08-5 CAPLUS
CN Carbonotrithioic acid, bis(trifluoromethyl) ester (9CI) (CA INDEX NAME)

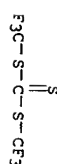


L7 ANSWER 46 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:19056 CAPLUS
DOCUMENT NUMBER: 64:19056
ORIGINAL REFERENCE NO.: 64:3446d-e
TITLE: Reduction of unsaturated α-oxides by trialkylstannanes
AUTHOR(S): Bryskovskaya, A. V.; Al'Ditskaya, V. M.; Petrov, A. A.
CORPORATE SOURCE: Leningrad Technol. Inst., Leningrad
SOURCE: Zhurnal Obshchei Khimii (1965), 1(10), 1898-9
CODEN: ZOKHAK; ISSN: 0044-460X

DOCUMENT TYPE: Journal
LANGUAGE: Russian

OTHER SOURCE(S): CASREACT 64:19056
AB 1,2-Dipropyl-3-butene and Et3SnH gave 50% mixed MeCH:CHCH2OH and CH2:CHCH2CH2OH, b. 118-20°, d20 0.8572, n20D 1.4268, along with (Et3Sn)2. Isoprene oxide similarly gave 2-methyl-2-buten-1-ol and 2-methyl-3-buten-1-ol, b. 132-6°, 0.8630, 1.4368.
IT 461-08-5, Methanethiol, trithio-, trithiocarbonate

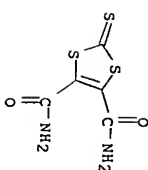
(preparation of)
RN 461-08-5 CAPLUS
CN Carbonotrithioic acid, bis(trifluoromethyl) ester (9CI) (CA INDEX NAME)



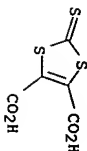
L7 ANSWER 47 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1965:424650 CAPLUS
DOCUMENT NUMBER: 63:24650
ORIGINAL REFERENCE NO.: 63:4431c-d
TITLE: 2-(p-Dimethylaminophenyl)-1,3-dithiolium iodide
INVENTOR(S): Kingsberg, Erwin
PATENT ASSIGNEE(S): American Cyanamid Co.
SOURCE: 2 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3187009		19650601	US	19630305

GI For diagram(s), see printed CA issue.
AB The title compound (I) gave bright pink dyes on polyacrylonitrile fiber. A solution of 0.130 mole of 4,5-dicyano-1,3-dithiole-2-thione in 160 ml. concentrated HCl was stirred for 5 days to give bright yellow 1,3-dithiole-2-thione-4,5-dicarboxamide (II), recrystd. from PhMe. A solution of 0.12 mole of II in 200 ml. concentrated HCl and 155 ml. H2O was refluxed for 4 hrs. to give orange 1,3-dithiole-2-thione-4,5-dicarboxylic acid (III), m. 150-2° (PhMe). To a solution of 11.1 g. III in 85 ml. MeOH was added 70 ml. MeI, and the mixture was refluxed for 8 hrs. to give 1,3-dithiole-2-thione-MeI (IV). A solution of 0.55 g. IV, 0.55 ml. PhNHMe2, and 10 ml. HOAc was heated on the steam bath 1 hr., cooled, and filtered to give 0.37 g. I, violet needles, m. 220-1° (HOAc).
IT 1008-61-3, Carbonic acid, trithio-, cyclic ester, with cyclic trithiocarbonate
RN 1008-61-3 CAPLUS
CN 1,3-Dithiole-4,5-dicarboxamide, 2-thioxo- (9CI) (CA INDEX NAME)



RN 1008-62-4 CAPLUS
CN 1,3-Dithiole-4,5-dicarboxylic acid, 2-thioxo- (9CI) (CA INDEX NAME)



L7 ANSWER 48 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1962:60494 CAPLUS
 DOCUMENT NUMBER: 56:60494
 ORIGINAL REFERENCE NO.: 56:11527c-1,11528c-d
 TITLE: Aminolysis and esterification of unsymmetrical epoxides

AUTHOR(S): Colclough, T.; Cunneen, J. I.; Moor, C. G.
 CORPORATE SOURCE: Nat. Rubber Producers Research Assoc., Welwyn Garden City, UK
 SOURCE: Tetrahedron (1961), 15, 187-92
 CODEN: TETRAE; ISSN: 0040-4020

DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

AB The reactions of 1,2-epoxy-propane (I) and 2-methyl-2,3-epoxypentane (II) with various primary and secondary amines and with hexahydrophthalic anhydride (III) in the presence of hydroxylic catalysts were studied. Interaction of Me2C:CHET and BzO2H in CH2Cl2 at 0-5° and fractionation through a 40-plate column yielded 80% II, b768 97.2-7.8°, n20D 1.3954. 1,3,4,4-tetrahydro-2H-pyran-2-one (IV) gave MeCHClCH2OH (V), b111 76.4-7.4°, n20D 1.4401. Similar reduction of MeCHClCOCl gave MeCHClCH2OH (V), b70 69.2-9.8°, n20D 1.4394. Treatment of Me2C:CHET with HOCl according to Wilson and Lucas (CA 31, 6578) yielded EtCHClCH2OH (VI), b84 92-4°, n20D 1.4445. Recrystn. from alc. and drying at 70°/0.1 mm. gave C5H11N.HCl, m. 242°. Other amine HCl salts were recrystd. from MeOH-Et2O mixts. II b15 146°, m. 36-7°. Interaction of 2 moles C5H11N and 1 mole IV 16 hrs. at 140° in vacuo yielded 86% C5H10NCH2CHMeOH (VII), b40 105-10°, HCl salt m. 159°. A comparable reaction with V gave 40% C5H10NCH2CH2OH (VIII), b80 118°, n1.4680; HCl salt m. 117-19°. The infrared spectra of VII and VIII differed slightly but the 2 types of OH groups were indistinguishable. Treatment of 1 mole MeCH2(CSH10N)CHMe2OH (IX); HCl salt m. 152°. All reactions of epoxides with amines were conducted in sealed tubes in vacuo. Reaction products were analyzed for secondary and tertiary amino groups by the dithiocarbamate and potentiometric titration methods, resp. The products resulting from treatment of II with amines at 140° in the presence or absence of catalyst were tabulated. Aminolysis of II occurred with primary alkyamines but not with NHEt2. BUNH2 reacted only in the presence of PhOH. Primary alkydiamines were more reactive than BUNH2 and yielded both mono- and diducts by reaction with I or 2 moles II. Reaction of CSH10N with II in the presence of 1 mole PhOH 40 hrs. at 140° yielded 100% IX. Equimolar ams. of I and CSH10N heated 16 hrs. at 140° gave 100% VII. Comparable reaction of 1 mole I with 1 mole CSH10N-NH.HCl, 1 mole CSH10N and 0.1 mole PhOH, and 1 mole CSH10N, 0.1 mole PhOH, and 1 mole H2O all gave VII. I (8.32 g.), 11.01 g. III, and 0.43 g. H2O heated 2.5 hrs. at 140° in vacuo, the viscous product distilled at 140°/0.01 with recovery of 11% unreacted I, the residue treated with aqueous NaOH, and extracted with Et2O gave 12.2 g. low polymer ester of a 2:1 epoxide-dicarboxylic acid mixture, v 3530, 1730, 1170 cm.-1. Acidification of the aqueous alkaline extract gave 5.7 g. condensation product, mol. weight 390. II (7.22 g.), 5.54 g. III, and 0.27 g. H2O heated 4 hrs. in vacuo at 140° and the product distilled gave 1.8 g. EtCOCHMe2, b. below 80°, 1.6 g. unidentified product, b0.07 26-37°, and 8.3 g. viscous impure bis(2-hydroxy-2-methyl-3-pentyl)

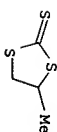


hexahydrophthalate, with infrared spectrum of a hydroxy- or half-ester. PrCMe2OH (X) (2 moles) and 1 mole III heated 4 hrs. at 140° gave 4.7 g. volatile fraction consisting of 0.7 g. PrCMe:CH2 and 3.8 g. EtCH:CHMe2, and 4.1 g. residual hexahydrophthalic acid, m. 182-4°. X (2 moles) heated 4 hrs. with 1 mole (CH2-CO2H)2 at 140° gave 96% (CH2CO2H)2 and 7.15 g. volatile mixture, b. 54-76°, comprising H2O and a mixture of 0.7 g. Pr-CMe:CH2 and 4.8 g. EtCH:CHMe2. Reaction mechanisms were discussed briefly.
 IT 822-38-8. Carbonic acid, trithio-, cyclic ethylene ester (preparation of)
 RN 822-38-8 CAPLUS
 CN 1,3-dithiolane-2-thione (9C1) (CA INDEX NAME)

L7 ANSWER 49 OF 49 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1955:55464 CAPLUS
 DOCUMENT NUMBER: 49:55464
 ORIGINAL REFERENCE NO.: 49:10668C-e
 TITLE: Waterproof proteinous adhesives
 INVENTOR(S): Jarvi, Reino A.
 PATENT ASSIGNEE(S): Monsanto Chemical Co.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2705680		19550405	US	

AB Dry combs. which form water proof plywood adhesives in solution are prepared by mixing a vegetable or animal proteinous material with 0.1-5.0% of an alkyene trithiocarbonate (II). The waterproofing is such that a 3-ply plywood panel bonded with these adhesives can be soaked for 48 hrs. in cold water or for 8 hrs. in boiling water without separation. A typical formulation consists of soybean flour 965 and ethylene trithiocarbonate 10 in pine oil 10 and diesel oil 15 parts. One hundred parts of this composition is dissolved in a mixture of water 342, Ca(OH)2 12, NaOH 8, and com. Na silicate 25 parts. Alkaline comds. may be included in the dry mix. These adhesives have higher dry and wet strengths than similar combs. prepared without I. The I also act as antifoulers and are nonvolatile, relatively nonflammable, and free of objectionable odor.
 IT 3489-45-0, 1,2-Propanedithiol, cyclic thioacetate (mixture with proteins, adhesives from)
 RN 3489-45-0 CAPLUS
 CN 1,3-Dithiolane-2-thione, 4-methyl- (9C1) (CA INDEX NAME)



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 1627 TRITHIOCAR?
 3807615 POLY?

94521 TONG?
557645 HARD?
399062 VINYL
569 VINYL
399226 VINYL
(VINYL OR VINYL)
58116 RESIN
392633 RESIN
722276 RESIN
(RESIN OR RESINS)
257023 UNSAT?
449249 ACRYL?
259040 METHACR?
131 TRITHIOCAR? AND POLY? AND (TONG? OR HARD? OR VINYL OR RESIN OR
UNSAT? OR ACRYL? OR METHACR?)
=> S L8 AND EPOXY
226438 EPOXY
2531 EPOXIES
226759 EPOXY
(EPOXY OR EPOXIES)
L9 11 L8 AND EPOXY
=> D 1-11 IBIB ABS
L9 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:60003 CAPLUS
DOCUMENT NUMBER: 142:135563
TITLE: Toughened vinyl ester
resins
INVENTOR(S): Lepilleur, Carole A.; Egan, David R.; Weber, Carl D.
PATENT ASSIGNEE(S): U.S. Pat. Appl. Publ., 57 pp., Cont.-in-part of U.S.
SOURCE: Ser. No. 681,679.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION: English
APPLICANTS

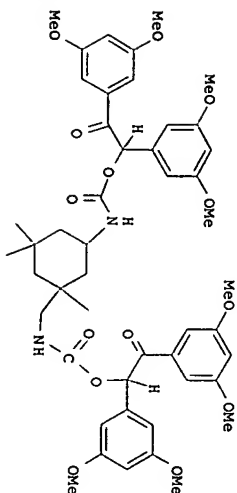
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005014910	A1	20050120	US 2004-782363	20040219
US 6396899	B1	20030722	US 2000-505749	20000216
US 2003187138	A1	20031002	US 2002-219403	20020815
US 6894116	B2	20050517		
US 2003120101	A1	20030626	US 2002-278335	20021023
US 2004073056	A1	20040415	US 2003-681679	20031008
WO 2005080326	A1	20050901	WO 2005-USA527	20050214
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, GU, HT, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RM: BM, GH, GM, KE, LS, MM, ME, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GN, GT, GW, HN, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
MR, NE, SN, TD, TG				
US 2005267274	A1	20051201	US 2005-192282	20050728
PRIORITY APPL. INFO.:			US 2000-505749	20000216
			US 2002-219403	20020815
			US 2002-278335	20021023
			US 2003-681679	20031008

AB A vinyl ester resin is derived from the reaction of an unsat. acid with an epoxy terminated polymer made from a ditlho or a trithio initiator, and optionally from an epoxy resin. The vinyl ester resin can be blended with a miscible toughener and a diluent to provide a time stable system and subsequently crosslink to provide a composition with improved toughening properties. Thus, polymerizing by acrylate in the presence of 5,5'-bis(α,α'-dimethyl-α''-acetic acid) trithiocarbonate initiator gave a carboxy-terminated polymer which was used as toughener for a vinyl ester resin.

US 2003-429323 A3 20030505
US 2004-782363 A 20040219

L9 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:97511 CAPLUS
DOCUMENT NUMBER: 140:147287
TITLE: Carbamic acid esters, base generators as curing agents, compositions reactive to bases, and applications of the compositions and their cured products
INVENTOR(S): Utsu, Hiromi; Toriumi, Suguru; Maki, Yasuaki
PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION: Japanese

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004035413	A2	20040205	JP 2002-190103	20020628
PRIORITY APPL. INFO.:			JP 2002-190103	20020628
OTHER SOURCE(S):			MARPAT 140:147287	
GI				



The esters are I (R = n-valent organic group; n = 2-10; X = H, Cl-10 hydrocarbonyl, Cl-10 alkoxy, halo; A and B may contain substituents). The compounds, showing good curability, are useful for sealants and adhesives, and the cured products are useful for optical materials and laminates. Thus, a composition comprising 4,4'-bis(32-hydroxyethoxy)diphenylsulfone diethoxyethyl ether and II was applied on a PET film and cured by UV irradiation to give a transparent layer.

L9 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2006 ACS ON STN
ACCESSION NUMBER: 2003:777421 CAPLUS
DOCUMENT NUMBER: 139:277550
TITLE: S,S'-bis-(α,α' -disubstituted- α' -

acetic acid)-trithiocarbonates and polymers thereof for toughening

PATENT ASSIGNEE(S):
SOURCE: Novoneon Ip Holdings Corp., USA
U.S. Pat. Appl. Publ. 30 pp., Cont.-in-part of U.S.

DOCUMENT TYPE:
LANGUAGE:
FAMILY ACC. NUM. COUNT
PATENT INFORMATION:

CODEN: USXXCO
Patent
English
7

APPLICANTS

PATENT NO.

[illegible]

APPELLATION NO

DATE _____

PRIORITY	US 20030187138	A1	200301002	US 2002-219403	200208151
	US 6894116	B2	200305517	US 2000-505749	200002218
	US 6596899	B1	200307282	US 2000-429923	200030506
	US 2003233006	A1	200312108	US 2003-429923	200303016
	US 6962961	B2	200501108	US 2004-182363	200402191
	US 20050101910	A1	20050120	US 2004-513572	200408086
	US 20050069999	A1	20050113	US 2005-198282	200507282
	US 2005267274	A1	20051201	US 2000-505749	200002161
PRIORITY APPLN. INFO.					

AB A toughener comprising a triethiocarbonate polymer having an epoxy end group is described which is utilized with various thermosettable polymers such as epoxy, polyurethane, and the like. A toughened composition is made by curing the thermosettable polymer and the toughener utilizing various curing agents.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE.

THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD

L9 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2003:411926 CAPLUS
 DOCUMENT NUMBER: 139:8231
 TITLE: Water-thinned anticorrosive C

Water-th

INVENTOR(S) : Sasaki, Motohiro; Saito, Koichi; Morisita, Atsunori; Takahashi, Akira
PATENT ASSIGNEE(S) : Nippon Pant Co., Ltd., Japan; Nippon Steel Corp.
SOURCE : Jpn. Kohai Tokkyo Koho, 14 pp.
Jpn. Kohai Tokkyo Koho, 14 pp.

DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.

KIND	DATE
1	1950
2	1951
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98	2047
99	2048
100	2049

APPLICATION NO. DATE

JP 2003155454	A2	20030530	JP 2001-353753	20011119
PRIORITY APPLN. INFO.:			JP 2001-353753	20011119

compositions; (b) 0.1–20% silica particles; and (c) 0.01–5% guanidine dispersions. Thus, a water-thinned composition containing (a) a reaction product of bisphenol A diglycidyl ether, and (c) 0.1–20% methacrylate copolymerized with Krasnol KD 5 (acrylic polymer), hydrogenerated bisphenol A diglycidyl ether, and (c) dipropoxys(trimethoxysilane)silane, thiourea, and secondary ammonium phosphate was applied on a galvanized steel plate and baked to give a coated plate with improved adhesion and good solvent and alkali resistance.

L9 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:411923 CAPLUS

DOCUMENT NUMBER:

TITLE:

INVENTOR(S) :

PATENT ASSIGNEE(S)

SOURCE:

DOCUMENT TYPE:

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:

1

PATENT NO.

KIND	DATE
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2	1951
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100	2049

DATE

PRIORITY APPLN. INFO.

OTHER SOURCE

AB The coatings contain (a) 5-30% (as solid) water-thinned polymer dispersions, (b) 0.1-20% silica particles, and (c) 0.01-20% organic titanates. Thus, a water-thinned composition containing (a) a reaction

product of

kanepinol KD 5 (acrylic polymer), hydrogenated bisphenol A diglycidyl ether, and 3-glycidioxypropylmethyldimethoxysilane, (b) Snowtex N (silica), and (c) dipropoxybis(trimethoxysilane) titanium, thiourea, and secondary ammonium phosphate was applied on a galvanized steel plate and baked to give a coated plate with improved adhesion and good solvent and alkali resistance.

L9 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:718028 CAPLUS
DOCUMENT NUMBER: 137:295792
TITLE: A method of treating the surface of a substrate polymer useful for graft polymerization

INVENTOR(S): Kambouris, Peter; Whitaker, Michael; Davis, Tom; Blakey, Idrius; Day, Gary
PATENT ASSIGNEE(S): Polymerat Pty. Ltd., Australia
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002079305	A1	20021010	WO 2002-AU416	20020328
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, GR, GU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, MX, MY, MZ, NA, NI, NL, NO, NZ, OM, PA, PE, PG, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM				
RM: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GM, ML, MR, NE, SN, TD, TG				
US 2003088028	A1	20030508	US 2002-109777	20020328
US 6858309	B2	20050222		
EP 1383828	A1	20040128	EP 2002-712637	20020328
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AU, TR, AL, TR				
PRIORITY APPL. INFO.: AU 2001-4048 A 20010328 WO 2002-AU416 W 20020328				

AB Radicals are generated on functional and/or backbone portions of polymers forming part of a solid phase surface and/or sub-surface to generate a substrate for initiation of polymerization. The polymerization is conducted in the presence of a control agent which induces a dynamic population of anchored growing (in a controlled manner) and dormant polymeric chains each comprising 22 monomers. Polymers generated by this process include homopolymers and copolymers (comprising 22 monomers including terpolymers) such as inter alia block, graft, tapered, crosslinked and branched polymers. The substrate PMA 6100 was irradiated from Co-60 source, treated with TEMPO control agent, washed and dried, and graft polymerized with styrene at 80° for 16 h.

REFERENCE COUNT: 13
THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:671892 CAPLUS
DOCUMENT NUMBER: 137:171126
TITLE: Water-thinned coating composition for treating metal surface
INVENTOR(S): Sasaki, Motohiro; Saito, Koichi
PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan

SOURCE: PCT Int. Appl., 30 pp.

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002064856	A1	20020822	WO 2002-JP1214	20020214
RM: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2002241957	A2	20020828	JP 2001-37605	20010214
JP 2002241957			JP 2001-37605	A 20010214

PRIORITY APPL. INFO.:
AB Title coating composition with good anticorrosion, elec. conductivity, and adhesion

comprises (A) aqueous dispersing resins 5-30 (solids content), (B) silica fine particles (e.g., Snowtex N) 1-10, (C) thioacarbonyl compds. (e.g., thiourea) 0.02-5, and (D) phosphate ions 0.01-0.5 wt%, wherein A are obtained by neutralizing 230t of carboxyl groups with potassium ions in an ethylene-unsatd. carboxylic acid copolymer containing 10-30 wt% of the unsatd. carboxylic acid (e.g., Primacor 55801) and then reacting the water-dispersed ionomer resin with epoxy compds. (e.g., Denacol 313).

REFERENCE COUNT: 6
THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1968:69704 CAPLUS
DOCUMENT NUMBER: 68:69704
TITLE: Polymers from epithio compounds
INVENTOR(S): De Acetis, William
PATENT ASSIGNEE(S): Shell Oil Co.
SOURCE: U.S., 8 pp.
CODEN: USYXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3369040	A	19680213	US 1962-231852	19621019
US 3369040			US 1962-231852	A 19621019

PRIORITY APPL. INFO.:
GI For diagram(s), see printed CA issue.

AB The title compds, which are used as curing agents for polyepoxides and in adhesives for metal bonding were prepared by treating a polythiazane with H₂S. Thus, CS₂ (2440 parts) was added to a mixture containing 1500 parts KOH and 5500 parts MeOH at 30°. 4-Vinylcyclohexene dioxide (I) was pumped into the reaction vessel at 0.5 part/min. After the addition of 750 parts I, the mixture was stirred 60 hrs., 3000 parts H₂O was added, and excess CS₂ and MeOH were removed in vacuo at 30° to give yellow bis(trithiocarbonate) (II), m. 145-53°. II in 3000 parts tetrahydrofuran was added to a mixture containing tetrahydrofuran 2000, Et₂O 500, LAH 280 parts and the resulting mixture was refluxed 2 hrs. and cooled to 0°, and 1300 parts H₂O and 3000 parts concentrated HCl were added. The mixture was stirred 60 hrs. and the organic layer separated and worked up to give light yellow 1-(1,2-dimercaptoethyl)-3,4-dimercaptothiazane (III). Bisphenol A (IV) diglycidyl ether (Iva) was heated with an equivalent amount of III in the presence of 1t PhCH₂NEt₂ at 100° to give a hard insol. casting. IV bis(2,3-dimercaptoethyl ether) (V) was prepared by treating IV bis(2,3-epithiopropyl) ether with H₂S in MeCN. Bis(2,3-dimercaptoethyl ether) (VI) was prepared by treating diglycidyl ether with CS₂ in the

presence of methanolic KOH followed by LiAlH₄ reduction V and VI treated with
Iva also gave polymers.

L9 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1967:55949 CAPLUS
DOCUMENT NUMBER: 66:55949
TITLE: Polymerization catalysts for olefin oxides
and sulfides

INVENTOR(S): Lal, Joginder
PATENT ASSIGNEE(S): Goodyear Tire and Rubber Co.
SOURCE: Fr.

DOCUMENT TYPE: CODEN: FRXXAK
LANGUAGE: Patent
FAMILY ACC. NUM. COUNT: French
PATENT INFORMATION: Patent

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1446901	FR	19660722		
DE 1570695	DE			
GB 1117183	GB			
GB 1117184	GB			
US 3345308	US	19670000		
	US			19640918

PRIORITY APPLN. INFO.:
AB Mono-, di-, tri-, and tetrasubstituted oxiranes or thiranes were
polymerized in the presence of a catalyst. Thus, 20 ml. propylene
oxide (I) in 40 ml. n-heptane was purged with N for 2 min., 0.4 g. Zn
butyl xanthate (II) added, the mixture purged with N for 1 min., the flask
hermetically sealed and kept at 25 for 64 hrs. The polym.
was stopped by the addition of 20 parts MeOH containing 0.2%
phenyl-β-naphthylamine and, after drying under aspiration for 24 hrs.
and under 2 mm. at 40° for 68 hrs., a I polymer with an
intrinsic viscosity of 2.6 dl./g. was obtained. Other polymers
and copolymers were prepared similarly (monomer or mixture of monomers,
catalyst, and intrinsic viscosity of polymer in dl./g. given):
1-butene (III), II, 2.8; allyl glycidyl ether, II, 0.7; 1-octene, II, 0.5;
I and vinylcyclohexene oxide, II, 3.6; III and vinylcyclohexene oxide, II,
1.9; I, Zn methylxanthate, 2.85; styrene oxide (IV), Zn tetramethylene
xanthate, -; IV, Sr tetramethylenexanthate, -; IV, II, 4.6; propylene
sulfide (V), Cd isopropylxanthate, 0.9; I, Mg methoxymethylxanthate, -; I,
Zn methoxymethylxanthate, 3.4; 2-octene oxide, Zn methoxymethylxanthate,
-; I, Zn isopropylxanthate, 2.1; I, Cd isopropylxanthate, 0.4; I, Fe
dimethyldithiocarbamate, 0.9; I, Zn ethyl trithiocarbamate, 0.2; I, Zn
dimethyldithiocarbamate (VI), 4; I, Zn pentamethylenedithiocarbamate, 3.2;
I, Zn dibenzylthiocarbamate, 0.35; ethylene oxide, VI, 0.4;
epichlorohydrin, VI, 0.5; V, VI, 0.26; V, Cd dimethyldithiocarbamate, 0.3;
V, Cd pentamethylenedithiocarbamate, 2.5; I, Zn thioacetate, 3.6; I,
thioacetate, 1.34; V, Zn thioacetate, 0.64; I, Zn dithioacetate,
5.8; 2-octene oxide, Zn thioacetate, 0.2. I and allyl glycidyl ether
were copolymerized in the presence of Zn isopropylxanthate and the vulcanized
copolymer had a tensile strength of 75.57 kg./cm.², an elongation at break
of 81%, and a 300% modulus of 8.85 kg/cm.². The catalyst compns. were
also used as curing agents for epoxy resins.

L9 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:436418 CAPLUS
DOCUMENT NUMBER: 65:36418
ORIGINAL REFERENCE NO.: 65:6748e-g
TITLE: Electroplating process and self-regulating
electroplating bath
INVENTOR(S): Michael, Gregor
PATENT ASSIGNEE(S): DEHYDAG Deutsche Hydrierwerke G.m.b.H.
SOURCE: 5 pp.
DOCUMENT TYPE: Patent

LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3245886	US	19660412		
US 3245886	DE			19620801

PRIORITY APPLN. INFO.:
AB A description is given of a self-regulating process for the
electrodeposition of Cu, Zn, Ni, Pb, Sn, and Cd in the presence of
electroplating-active organic additives which are difficultly soluble and are
known to produce brightening, leveling, grain-improving, or
porosity-preventing effects and contain, one or more N and (or) S-containing
groups, such as thiourea, dithiocarbamic acid, trithiocarbamic
acid, xanthic acid, thioamides, or thiosemicarbazide, mercaptothiazole,
or mercaptothiazole groups and other groups which contain a C
attached only to hetero atoms, as well as azido, alkylendiamine,
polyamide, and similar groups. Electrodeposition is conducted in
an aqueous acid bath solution of an inorg. salt of the desired metal while
continuously circulating the solution through a confined body of the active
organic additive coated on a solid carrier and back to the bath. The
difficultly soluble organic compds. (whose saturation concentration amounts to
0.5-500 mg./l. of bath solution and whose critical concentration amounts to 1/2 of
this saturation
concentration) are mixed with 10-30% of a suitable solvent or a swelling agent,
such as MeOH, EtOH, PrOH, iso-PrOH, acetone, Et₂O, MeOAc, EtOAc, BuOAc,
xylene, pyridine, CH₂Cl₂, CCl₄, and H₂O alone or in combination with each
other, and 1-10% of a thickening agent such as the cellulose, carboxymethyl
cellulose, poly(vinyl acetate), poly(vinyl
vinyl propionate) to form a paste which is applied onto the
carrier, such as spheres, Rasching rings, perforated disks made of glass,
ceramic, porcelain, filter paper, or plastic resistant to chemicals. The
coated carrier material may either be inserted into the solution filters or
may be provided in the form of a column inserted in the recycling line.

L9 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:19056 CAPLUS
DOCUMENT NUMBER: 64:19056
ORIGINAL REFERENCE NO.: 64:3446d-e
TITLE: Reduction of unsaturated α-oxides by
trialkylstannanes
AUTHOR(S): Bryskovskaya, A. V.; Al'bitskaya, V. M.; Petrov, A. A.
CORPORATE SOURCE: Leningrad Technol. Inst., Leningrad
Zhurnal Obshchei Khimii (1965), 1(10), 1898-9
CODEN: ZOKHAA; ISSN: 0044-460X
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 64:19056
AB 1,2-Epoxy-3-butene and Et₃SnH gave 50% mixed MeCH:CHCH₂OH and
CH₂:CHCH₂CH₂OH, b. 118-20°, d₂₀ 0.8572, n_D 1.4268, along with
2-methyl-3-buten-1-ol, b. 132-6°, 0.8630, 1.4368.

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